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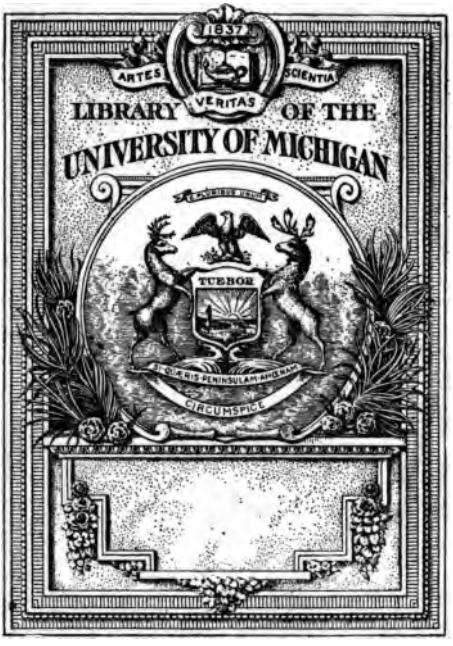
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Christian Belief in God

Published on the foundation established in memory of James Wesley Cooper of the Class of 1865, Yale College.

Christian Belief in God.

A German Criticism of German Materialistic Philosophy by

Georg Wobbermin, Ph.D.
Professor of Dogmatics in the University of Heidelberg.

Translated from the third German edition by

Daniel Sommer Robinson, Ph.D.
Acting Chaplain, U.S.N.

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MEINER LIEBEN FRAU

Publishers' Foreword

THE original work of Dr. Wobbermin was first published in Germany in 1900, being reprinted in 1907 and again in 1911. It was suggested that a translation should be brought out in this country by the Yale University Press, and the proposal was in December, 1914, brought formally before the Council's Committee on Publications of Yale University for its sanction. With the approval of the Committee arrangements were thereafter entered into with Dr. Daniel S. Robinson now Acting Chaplain, U. S. N., for the preparation of an American edition. The publication just at this time of his translation of Dr. Wobbermin's work seems especially significant since it presents to our people a careful analysis and incisive criticism by a German of that modernized form of German materialism and evolutionism expounded by such writers as Nietzsche and Haeckel. It has been felt by the publishers that it was desirable to make available this criticism by a German of German materialistic philosophy for the benefit of English-speaking people who seek to acquaint themselves with, even if they find it impossible to understand, the dominant thought of modern Germany.

Translator's Preface

IN such a calamitous time as this, when the question is quite generally being asked "Can any good thing come out of Germany?" it is with considerable trepidation that I venture to offer to the public a translation of a German book on the philosophy of religion. I am convinced, however, that any reader who may pick up this book with this sceptical attitude, will lay it down—if he will but carefully and thoughtfully read it through—with the consciousness that he has been guided through a most interesting mass of facts and theories by a thinker of the first rank.

Dr. Wobbermin needs no introduction to students of systematic theology and the philosophy of religion. It is generally known in theological circles that he delivered, in 1907, the Nathaniel William Taylor lectures at Yale University, and that one of these lectures was published shortly afterward in the Yale "Divinity Quarterly." That is all that has hitherto appeared in English from his pen. But in Germany he is known as the author of many important contributions to the history, as well as to the psychology and the philosophy of religion. His influence in German theology has grown until he stands today second to none among systematic theologians. It may be of interest to some to learn

that it was Dr. Wobbermin who translated into German William James' "Varieties of Religious Experience," and that he has been considerably influenced by James, although much more by Schleiermacher and Ritschl in theology, and by Kant in epistemology. He was recently transferred from the University of Breslau to that of Heidelberg.

I trust that readers of this translation may be induced to read other of Dr. Wobbermin's writings. His "Theologie und Metaphysik," "Systematische Theologie," (of which only one volume has so far appeared) and his "Monismus und Monotheismus" are especially valuable. I have appended to the notes at the end of the book a list of the books by Dr. Wobbermin published by J. C. Hinrichs and Company, of Leipzig, in appreciation of their having given me the English rights on this book. However, this is not a complete bibliography of Dr. Wobbermin's writings, since some of his books have been published by other firms.

This translation was completed and was accepted for publication several months ago. In fact, the work was practically completed at the outbreak of the world-war. Quite recently, however, the text has been carefully revised. In making this revision I was fortunate in securing the valuable assistance of Dr. Franz J. Döhmen, of Cambridge, Mass., who made a minute comparison of my translation with the original, and provided me with an alternative rendering. The translation as it now

stands embodies most of his changes. His thorough familiarity with both languages made it possible for him to correct many errors into which I had been led, and I am greatly indebted to him for making it possible for me to offer a much more accurate rendition than I could have done had I published my original translation. However, I have been guided throughout by the desire to make the book read like English rather than by the desire to be slavishly true to the original.

I am also indebted to Professor Douglas Clyde Macintosh for valuable assistance and encouragement, and to Dr. Wobbermin for having read my manuscript and for giving many helpful suggestions.

D. S. R.

Newport, N. H.,
March 9, 1918.

Preface to the Third German Edition

THIS little book seems to have met the modest purpose for which it was intended. The text remains unaltered in this third edition, but the notes and references have been revised and made more complete. In doing this I have kept strictly to my original intention that this booklet should serve simply as an orientation and as a guide to further study.

For a fuller discussion of the thoughts expressed in this book, I refer to my recently published "Monismus and Monotheismus, Vorträge und Abhandlungen zum Kampf um die monistische Weltanschauung," Tübingen, 1911.

GEORG WOBBERMIN.

Breslau, July, 1911.

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Chapter One

The Chief Tendencies of Present-Day Philosophy and Its Relation to Modern Natural Science

FRIEDRICH NIETZSCHE, the fashionable philosopher of our day, has somewhere said that all systematizers should be distrusted and shunned, inasmuch as the will to systematize indicates a lack of integrity.*

Nietzsche's own works, with their brilliant epigrams, aphoristic in form and too often mutually contradictory, are indeed a model of absolute lack of system. Now it must be frankly conceded, so it seems to me, that the systems of human opinions and world-views, from the most ancient down to the most modern, and the purely philosophical no less than the theological, give this great scoffer sufficient occasion for this epigram. For they often resemble the work of the spider, who spins his ingenious web entirely from himself. But on the other hand, systematic completeness belongs necessarily to every genuine philosophy in the sense that such a philosophy must proceed from a permanent, well-founded position, and from that

* Götzendämmerung, WW., VIII, p. 61.

seek to win a unified, harmonious view of things and of life.

Both are, however, completely lacking in Nietzsche. Hence, in the proper meaning of the word he cannot even be considered a philosopher, to say nothing of his being taken as a representative of current philosophy. To be sure Nietzsche represents modernness in a certain sense; modern life, the stirrings and moods of the modern mind—its unrest, its disjointedness, and its distraction. But precisely the most important characteristics of modern philosophy as modern are lacking in his works, the most important because they relate to the starting point and to the method of philosophizing. These characteristics are, to mention them here at the outset, empirical knowledge as the starting point, and critical thought as the method. Indeed with Nietzsche the lack of foundation and of system is so great that, taken as a whole, his doctrines and his world-view are equally as fanciful and capricious as cob-web systems.

This is especially and quite manifestly true of his doctrine of the *eternal recurrence of all things*,* one of the two ideas really and steadily maintained by Nietzsche from their first conception. This theory, at least in the application which he makes of it and for which it is of consequence to him, is

* This conception is found for the first time in the "Fröhliche Wissenschaft," which appeared in 1882. The same idea dominates the Zarathustra Schriften, and plays an important part in the posthumous works.

the purest mythology. The supposition that everyone must live over again the life he is now living, and that this is to happen a countless number of times—this new and unfruitful form of belief in immortality which Nietzsche sets over against the Christian belief, is, as I said, for present-day thought, the purest mythology; for it has neither a theoretical nor a practical basis, nor is one led to it either by theoretical or by practical motives. Among the Babylonians, the Pythagoreans and the Stoics this belief at least had a proper meaning, but no such connotation belongs to it to-day.

Nor is it very different with the other underlying and basic thought of Nietzsche, his cardinal and most unique underlying conception, namely, that of the necessity of a *re-evaluation of all values*, the necessity of substituting for the stupifying slave morality of sympathy the master morality which alone promotes culture, a morality of reckless self-assertion and self-indulgence. Here he has at least attempted to give a real demonstration, which is to be found in the "Genealogy of Morals," the only one of his so-called philosophical writings which might lay any claim to being scientific and philosophic. Nevertheless this attempt to give a historical or historico-philosophical basis to the doctrine of "double morality" fails completely. Instead of being historical it is in the highest degree unhistorical—a poetical, fanciful conception, or better, construction. The real historical development

of moral ideas, that is to say, of moral norms and values, cannot be fitted into the scheme of master and slave morality. Moreover, Christian morality, however much it desires to be and is universally humane, is not a slave morality in Nietzsche's sense of demanding that all men be treated and valued as absolutely equal. Beyond doubt the kernel of truth in Nietzsche's thought lies in his emphasis upon independence and the intrinsic value of the strong-willed personality. But on the other hand, unless we would drive this principle at once to extremes, we must not use it as an argument against Christian morality itself, but only to correct a pietistic limitation of Christian morality. Even so proud an utterance as that of Zarathustra: "And verily there came to me many a chance imperiously, but even more imperiously my will spake to it, and forthwith it lay upon its knees imploring mercy," are so little in contradiction with the Gospel that, apart from the ambiguity of the word "chance," it expresses one and only one of the fundamental moods of the Bible. Think, for example, of the story of the temptation.

In discussing these two fundamental conceptions I have already criticised the doctrine of the superman which Nietzsche builds upon these two pillars. He is the superman who exalts himself above the crowd, who exalts himself, indeed, above the limitations of humanity itself. Therefore the morality of mankind is not applicable to him, but only that exceptional morality which Nietzsche designates

master morality. Only the superman can endure the thought of an eternal recurrence. Hence it is precisely this belief in the eternal recurrence which overcomes humanity and breeds the superman. Consequently this idea of the superman is a fiction which entirely disregards experience. Indeed its supposition of the possibility of a breeding of the superman even directly contradicts experience.

Nietzsche intends this belief in the superman to supplant belief in God. "Dead are all the Gods: now do we desire the superman to live. Let this be our final will at the great noontide! Thus spake Zarathustra." "Before God we are all equal, (so the populace blink). Before God!—Now, however, this God hath died. Ye higher men, this God was your greatest danger. Only since he lay in the grave have ye again risen. Now only cometh the great noon-tide. Now only doth the higher man become—master! God hath died, now do we desire the superman to live." *

As a matter of fact this conception of the superman is even with Nietzsche manifoldly iridescent and often reshaped. Indeed he himself did not maintain it to the end. Hence what has been said may suffice to justify passing on over Nietzsche and his steadily growing animosity to the Christian belief in God, which in his later works already presages insanity. This belief he finally characterized as the one great spiritual perversity, the one

* WW. VI, pp. 115, 417.

ineffaceable blemish of humanity.* To be sure, disciples have gathered around the name of Nietzsche. Yes, a Nietzsche cult has sprung into existence! But the movement seems to be ebbing away even now, and there can be no doubt but that the waters will soon subside entirely of themselves. A serious and thorough argument with Nietzsche over belief in God is neither possible nor necessary. His own words are valid against himself: "This thinker needs no one to refute him because he does that sufficiently himself." A debate with his so-called disciples is even less necessary, since, almost without exception, they either fail to understand their master at all, or else they do not rightly interpret him.

This does not mean, however, that the work of Nietzsche is entirely fruitless and valueless for religious thought and belief in God. On the contrary it is possible for it to become exceptionally productive for such a purpose. For upon close examination it will be found that motives of a religious nature are by no means lacking in Nietzsche's own thinking. But these genuine religious motives are, as a rule, either subsequently violently and artificially distorted, or else they lose their proper meaning. For example I need only to refer to the well-known verse in the famous "Midnight Song," which friends and admirers have had chiseled upon the memorial stone on the shore of Lake Silser, in the Upper Engadine:

* WW. VII., p. 186 (Antichrist).

Chapter I—Tendencies

"O man! Take heed!
What saith deep midnight's voice indeed?
'I slept my sleep—
'From deepest dream I've woke and plead:—
'The world is deep,
'And deeper than the day could read.
'Deep is its woe—
'Joy—deeper still than grief can be:
'Woe saith: Hence! Go!
'But joys all want eternity—
'Want deep profound eternity!'" *

Anyone having anything like a fine appreciation of the religious life will at once recognize the point of relation between the feeling expressed in this verse and belief in God. Nor is it merely a relation of remote analogy, indeed it is exactly the most significant psychological fundamental motives and fountain heads of religion which are involved.

"The world is deep,
And deeper than the day could read."

This implies that the meaning and import of the world which surrounds us, and in which we live,

* I have taken this from the English translation of the works of Nietzsche. Vol. II, p. 279. Here is the original (WW. VI, p. 332):

O Mensch! Gib acht!
Was spricht die tiefe Mitternacht?
Ich schlief, ich schlief—,
Aus tiefem Traum bin ich erwacht:—
Die Welt ist tief,
Und tiefer als der Tag gedacht.
Tief ist ihr Weh—,
Lust—tiefer noch als Herzeleid:
Weh spricht: Vergeh,
Doch alle Lust will Ewigkeit!
Will tiefe, tiefe Ewigkeit! *Tr.*

is not to be fathomed by superficial reflection. And that means, in the first place, that the world has a meaning. It is not meaningless, purposeless and aimless. Consequently, realizing or at least divining this, we may neither look upon nor conduct our life aimlessly and as though it were meaningless. And, in the second place, it means that only he who bores into the depths will be able to comprehend this meaning, for, as a matter of fact, it does not lie in that which presents itself immediately and passively to the senses. It is upon this conviction that religion bases its faith in a world or sphere of life of the "beyond," a world which is designated or conceived as "beyond," first, because, as is asserted, in its nature and import it extends beyond the whole world of sense and phenomena (because it is deeper, or, to use a word which expresses the same thing under a different figure, higher than this); and second, because the phenomenal world receives meaning only by being brought into relation to the world of the "beyond."

And again:

> "Joy—deeper still than grief can be:
> Woe saith: Hence! Go!
> But joys all want eternity—
> Want deep profound eternity!"

Such an ardent longing for eternity, for the values and realities of eternity over against the transitoriness of all manifestations and achievements of the world of sense is another fundamental motive of religion. And this is in closest accord with the dis-

cussion above. The same thought is expressed in the hymn:

> O Ewigkeit, du schöne,
> Mein Herz an dich gewöhne,
> Mein Heim ist nicht in dieser Zeit. (Tersteegen.)*

From this the desire is born in religion to subordinate everything of "this world" to the "world beyond." To use the language of Schleiermacher, it is the desire "to become one with the infinite while still in the finite and eternal at once." Of course the meaning of the words eternal and eternity in religious usage, especially in that of the Christian religion, is altogether different from that ordinarily connected with the words. Indeed, the quotation just given from the Christian author shows that very clearly. As interpreted by the Christian belief in God eternity does not mean simply the endlessness of time, and not, therefore, the passing of time. Indeed, if we seek an understanding of the word eternity from the psychological approach, it stands in contrast with the temporal as such and means the surmounting of everything temporal and ephemeral—of all changing finite existence. And Nietzsche's "Midnight Song" shows that he comprehended, at least in a measure, this turn and interpretation of the word. His more specific characterizations of eternity testify to this—"deep, profound eternity," for it must be noted that the word deep here is manifestly in-

* O Eternity, Thou beautiful, my heart lives in thee, my home is not in time.

tended to connect with and to recall the thought expressed in the preceding sentence—"the world is deep." But it is precisely this connection which is significant and conclusive for the religious consciousness. For eternity, in the sense in which the word is used in the Christian religion, signifies precisely the eternal and profound substance of cosmic and of human history—its eternal foundation in God and its eternal relationship to God.

Finally, therefore, these lines of Nietzsche lead to genuine religious optimism; not a powerless optimism which dreams itself away unaffected by the tribulations and contradictions of life, but a higher, courageous, strong-willed optimism which abides in spite of all adversity and suffering in its "nevertheless"

"Joy—deeper still than grief can be."

For the ultimate and deepest meaning of the world does not lie in sorrow but only in joy; not in the depreciation and negation of life, but in its affirmation, enrichment and elevation. Imbued with such optimism the Apostle Paul said: "For our light affliction which is for the moment, worketh for us more and more exceedingly an eternal weight of glory, while we look not at the things which are seen, but at the things which are not seen; for the things which are seen are temporal, but the things which are not seen are eternal." II Cor. 4, 17f.

All of these thoughts, which spring from the depths of the human spirit, and which are from

their very conception intrinsically related with one another, are in the Christian belief in God consistently welded in the conviction that the phenomenal world, presenting itself to us to begin with, and our own life in it, are not ultimate, not an end and goal in themselves, but rather, that they have the ground and purpose for their existence in a deeper or higher world—the world of God; and that it is only through reference to his eternal being and to the eternal essence of his Kingdom that God gives meaning and purpose to this phenomenal world of ours, supporting and actively permeating it. Thus the destiny and goal of human life is to grow beyond itself, and into fellowship with God.

When once these feeling and thought motives so strongly attested by Nietzsche are recognized as valid and as pointing in the right direction, they can be united with the Christian belief in God and its ideal of fellowship with God. For this would be incomparably more natural and satisfactory than the interpretation of these motives of Nietzsche to favor the theories of the superman and the eternal recurrence of all things. For critically considered these theories contradict and annul one another. For when the doctrine of the eternal and inevitable recurrence of all things (alles Werdens und Geschehens) is taken seriously there can be no final goal. Moreover, strictly speaking, the superman cannot be the goal of evolution, for even the very idea of a development toward an end must

be unconditionally rejected. Indeed Nietzsche himself occasionally demanded this.* Yet this idea is the real motive of the whole doctrine of the superman![1]

But if Nietzsche cannot be considered a representative of present-day philosophy who can be so considered? Another name might be mentioned, and certainly with greater justification than that of Nietzsche—the name of Richard Avenarius (died 1896). He was the founder of what he called the empirio-critical philosophy or the philosophy of pure experience, and he was at one with Nietzsche in radical warfare against all forms of belief in God. But the philosophy of Avenarius is a polar opposite to that of Nietzsche. For he emphasizes empiricism—the actual reality—as the starting point of philosophizing, and demands just as emphatically the critical method (which is the real scientific method) for this philosophizing. Hence it is possible to examine the philosophy of Avenarius critically and in detail. Consequently it is not surprising that he has found adherents in considerable numbers among the younger generation of philosophers. In the "Vierteljahrsschrift für wissenschaftliche Philosophie" this school possesses its own organ which is thoroughly modern. And in the discussion of philosophical problems this school has undertaken the extremely important task of bringing about a union and free interplay of ideas between philosophy and the exact sciences. Never-

* WW. XII, pp. 51 ff.

theless I can briefly dispose of this philosophy of pure experience. For while it may in fact be called the most characteristic phase of present-day scientific philosophy, yet it does not represent that philosophy with which we are concerned, be it as a dangerous opponent or as a welcome ally of the Christian belief in God. For the present this philosophy will not exercise a wide-spread influence, at least not in the form in which it has thus far been expounded. Neither the chief work of Avenarius himself—his voluminous "Kritik der reinen Erfahrung," intentionally so entitled to pattern after Kant's "Kritik der reinen Vernunft"—nor the works written by his pupils, among whom Willy and Petzoldt are the most representative, will be very influential. The highly complex terminology with which these works are set forth, and which requires study in itself, will prevent that. If Nietzsche attaches so much value to the linguistic terms, to the style and literary form, that the real philosophic interest stands in the background, the opposite extreme is found in the empirio-critical philosophy. Here there is a neglect of the art of expression that greatly impedes the understanding.

The basic thesis of this philosophy, from which radical warfare against belief in God in any form at once follows, is the systematic rejection of the distinction between *inner* and *outer* experience. According to Avenarius this distinction, and the consequent assertion of a special inner experience along side of the outer, has heretofore been the

great and fundamental falsehood and self-deception of all methods of thought. He thinks that this distinction is entirely uncritical, and that it is directly connected with the naïve, animistic conceptions which we find in children and uncivilized peoples, who transfer their psychical experiences to all objects perceived by them, thinking all of them animated, and thus finally set up a reduplication of the whole conception of the world. Just as the doll or flying dragon is to the child not merely the particular thing of this or that kind, but at the same time the home and abode of some sort of special capabilities and powers, so every distinction between inner and outer experience is claimed to rest upon a similar unwarranted reduplication of the given facts. Thus, then, belief in God would be proved a pure illusion, being rooted, and indeed admittedly so, in the inner experience pure and simple, even though the attempt be perhaps subsequently made of establishing it from outer experience.

This argument, however, undoubtedly rests upon serious epistemological and psychological errors. The distinction between inner and outer experience is *warranted*, indeed it is *necessary*, for it follows naturally and imperatively from the nature of the human psychical life. Our mind, or to put it differently, the content of our consciousness, and that is the only thing which is direct and immediate for us, is essentially of a dual nature. On the one hand, it consists of sense-mediated representations

which point to material things external to us, and which present themselves with the claim of being images of these material things. But on the other hand, this content of consciousness is made up of a great variety of will-tensions (Willensspannungen) and impulses of feeling. The latter are distinguished from the former just in this, that they do not, at least not directly and primarily, refer to things in the outer world, but that, on the contrary, they merely express our own inner life. Subsequently, to be sure, these will-tensions and feeling impulses often give the mind occasion for assuming objects (still other objects than those mediated by the senses) as really existing in the outer world. Avenarius suppresses entirely the latter part of this duality, namely, the fact of will-tensions and feeling impulses. At any rate he suppresses it in his first formulation, but that is just where it would be of decisive significance. Later he gives this fact some consideration, but not until he has reached a point where it can no longer injure his theory—an artifice that is much favored and often used by systematizers. Only in this way are Avenarius and his disciples able to establish the fundamental thesis of their philosophy, a thesis which, from the outset, takes away the very basis of faith in God. The faultiness of this thesis is merely concealed by the mass of difficult and complex discussion of details. But the fundamental distinction between inner and outer experience remains valid, no matter how their relation to one another may be de-

fined, for this may certainly be done in various ways.

Here, therefore, I shall not enter into a more detailed discussion of the philosophy of pure experience. In reference to it I shall only mention what seems to me the point really worthy of attention, namely, that here the attempt is made to make higher mathematics and biology fruitful for philosophic reflection. This attempt has been made by quite a number of other philosophers of our day, but nowhere with the same vigor, and in the same methodical and systematic manner as here.[2] Indeed I consider this to be a real service. For it seems to me that the methods and results of both of these disciplines must play an important rôle in all future attempts at systematizing, be they theological or purely philosophical. Within the scope of these lectures my further discussion will substantiate this opinion.

So then, neither Nietzsche nor Avenarius can be considered representatives of present-day philosophy. But then there seem to remain a vast throng of heterogeneous thinkers whom we must now consider. For the saying "there are as many philosophies as philosophers," which might be thought true with reference to philosophy in general, holds with special force at the present time. Indeed this is not merely a semblance. Just at present all matters in philosophy are actually in a state of flux. The fields of epistemology and psychology of the senses show a certain exception, but even of

them this is true only with important restrictions. And, while these disciplines are undoubtedly the foundations proper of present-day philosophy, yet they only interest us here indirectly. But when we inquire for the complete philosophical world-view, with whose bearing on the Christian belief in God we are concerned, we find a motley collection.

When examined more closely, however, the seemingly inextricable thicket clears to a certain extent before the more penetrating investigation. Certain perspectives and lines of procedure are disclosed which do not, to be sure, point to a uniquely determined conclusion, but which do, nevertheless, indicate a goal lying within definite limits.

Two such general lines of development appear to me to be especially characteristic and determining for present-day philosophy. One is the return to Kant, especially to his epistemology; and the other is the concept of evolution, or, more generally expressed, evolutionary thought.

Indeed it might be held that both of these movements are reducible to one, namely, the first, because as a matter of fact the concept of evolution is itself both directly and indirectly dependent upon Kant. It is dependent upon him directly in so far as the present doctrine of evolution, that is to say, the doctrine of the gradual origin of life and of the gradual development of living organisms, can consistently be expanded into a general theory

of cosmic evolution. For the latter was first scientifically established in the Kant-Laplacian nebular theory. This theory deduces the origin and motions of the various heavenly bodies from the rotation of a general and chaotic primordial nebula.* Indeed on various occasions Kant developed almost a complete program of the doctrine of evolution. This is to be found especially in paragraph eighty of his "Kritik der Urteilskraft" [3]—a paragraph often neglected. Moreover, for his ultimate world-view as a whole, transcending all particularities of his system, Kant gave a far reaching importance to the principle of evolution directed teleologically, that is, to the idea of a general ascending development toward an end. This has often been entirely overlooked, or, at least under-valued in its significance to Kant's work as a whole. For this he himself was partly responsible in that he did not explicitly emphasize this line of thought, but rather introduced it incidentally and took it as a matter of course. But nevertheless it is there, and it is by no means merely incidental to the whole of

* Kant developed this theory in a work which appeared in 1755 entitled "Allgemeine-Naturgeschichte und Theorie des Himmels," to which he gave the sub-title: "An essay on the constitution and mechanical origin of the whole cosmic system, based upon Newtonian principles." Essentially the same thoughts were soon after put forth by the French mathematician, Laplace. It was especially the English astronomer, Herschel, who brought this theory to the widest acceptance. Today the theory by no means passes uncontested, indeed it is open to many objections in its details, but its underlying principle—the conception of a cosmic evolution—is generally accepted.

his system—to the final collected result of his reflections. The ethico-theological and the historico-philosophical views of Kant are united with his teleological conception of nature in the hypothesis of a consistent evolution of the world, comprising all being and all phenomena, the physical and the ethical alike.[4] And this leads to the indirect dependence of the concept of evolution upon Kant to which attention must be called. For the modern conception of evolution is indirectly dependent upon Kant in so far as the idealistic speculative philosophy, which took up Kant's ideas, but which, to be sure, afterwards completely abandoned his critical position in very important and decisive points, has, through the very fact of taking up, developing, and completing Kant's ideas of evolution, helped to bring about the dominance of the modern conception of evolution.

While this must not be overlooked, it is nevertheless true that the conception of evolution gained the general acceptance and fundamental importance which attach to it today only through modern natural science. We must therefore admit that these two lines of development are independent and parallel. According as to whether one or the other predominates, and according to the measure of the predominance of the one over the other, we get different groups of philosophers and of philosophical world-views.

It suits my purpose best to distinguish three such groups, which may be considered chief groups.

I. = *The Positivistic Philosophy.*
II. = *The Materialistic-Naturalistic Philosophy.*
III. = *The Idealistic Philosophy.*

Each of these groups contains a variety of shades and gradations which must be differentiated under varying points of view, and must be brought into relation with one another. But these three tendencies and groups are nevertheless the most essential ones for my purpose, which is concerned with the relation of present-day philosophy to religion—in particular to the Christian belief in God.

They are comprehensible in their heterogeneity through the historical development of philosophy in the last half century.

Before the rigorous, systematic development of the exact sciences, (for which the eighteenth century prepared the way, but which has only been systematically carried out since the middle of the last century), philosophy had been considered the fundamental science and the mother of all the sciences. The exact sciences were in a relation of complete dependence upon it. They permitted it to prescribe the ends to be attained by their work, in most cases even to give them their results in advance—at least just the decisive and final results. Although Kant's epistemology should have put a stop to this procedure and attitude, philosophy nevertheless once more put forth its utmost exertions in this direction in the very years after Kant. Leaving all experience out of the question, philosophy attempted, purely from the reason, from

certain so-called highest rational ideas, arbitrarily to construct the whole of reality. All contrary empirical knowledge and the results of investigation were either ignored or forced into the system. Never before had this been attempted in such a comprehensive manner and on such broad lines as in the systems of the speculative philosophers of the first half of the nineteenth century, namely, those of Fichte, Schelling and Hegel. But philosophy had gone too far in its demands and had overestimated its powers. An Icharus-flight to the sun had been attempted and the headlong plunge to earth was inevitable. In fact, even before the middle of the century a reaction set in against the esteem in which philosophy had been held such as history had never before known. Though it had only yesterday reigned supreme over all human knowledge and thinking philosophy now suddenly became valueless. It was thought for a time that philosophy, which had come to be regarded as mere abstract speculation, had been demonstrated to be mere pseudo-science. It was thought that only experimental science should be considered real science, and that seriously minded men should no longer have anything to do with philosophy.

Of course this was to throw away the wheat with the chaff. In the first place it had been overlooked that the exact or experimental sciences work with definite hypotheses, habits and methods of thought without being able to test their justification or validity. For example take the hypothesis of

causality. Generally speaking is it valid at all? If so, why, how and how far is it valid? And if we find that certain habits of thought appear as norms of thought which are the basis of all thinking and knowing, does it not follow that these norms help to determine the whole of our knowledge, and that knowledge is by no means grounded in mere experience? Kant's epistemology had already set in just at this point. Hence a return to Kant, and therewith to a certain measure of philosophic reflection, was soon seen to be necessary. The fundamental principles and rules common to all scientific thinking, and inherent in empirical knowledge, cannot be sufficiently analysed and criticised by any single empirical or experimental science. That can only, and must of necessity, be done by philosophy, reflecting upon the sum total of empirical knowledge as well as upon all human thinking and knowing. In other words, in the form of logic, epistemology and methodology philosophy is in any case indispensable, and as such it is necessary for the pursuit of the exact sciences.

This field of work was, in fact, the first to be won back for philosophy. But, quite naturally, it was frequently demanded that philosophy be unconditionally limited to this task as a matter of principle. At most, it would be conceded, the field of ethics, like logic itself, might be treated according to purely logical principles. As for the rest, philosophy was to confine itself strictly to the analysis of positive knowledge. This is the

positivistic school of modern philosophy. It gets its name from a work written by the French philosopher, Auguste Comte (1798–1857), entitled "Cours de philosophie positive." This school has found eminent and acute exponents in Germany among the so-called Neo-Kantians. These men have rendered the great service of having again paved the way for philosophic reflection. They have also had a significant part in reviving the study of Kant.

Cohen and *Natorp* belong to this school, the former being well known because of his penetrating studies in the philosophy of Kant, the latter especially by his pedagogical publications.[5] *Ernst Mach* of Vienna, originally physicist, later philosopher, also belongs here; though he is not affected by a strong Kantian influence.[6] But there are many points of contact between Mach and the school of the so-called *immanence philosophy*, represented by *Schuppe*, *Rehmke*, and others.[7] The empirio-critical philosophy, which was discussed above, tried to push to its logical conclusion the view represented by Mach on the one hand and on the other hand by the immanence philosophy.

Liebmann of Jena (died 1911) and *Alois Riehl* of Berlin are usually classed with the Neo-Kantians and therefore as positivistic philosophers. But although they started from strict positivism they have gradually left that position and are more properly classed with the third group.[8]

Now arises the further question as to whether

another line of problems does not properly fall within the domain of philosophy. Since the exact sciences often lead to results with bearings beyond their scope (even when looked upon as infinite processes), results which make it imperative to establish a connection between them and the problems and results of other sciences, it is obvious that no one of these branches of science can, with prospect of success, undertake this comprehensive task, which includes the whole of human knowledge and thought. Here too, on the contrary, progress can be made only through general philosophic reflection. Philosophy must supply the superstructure as well as the foundation for the various fields of knowledge and investigation.

Still other more important considerations point in the same direction. For if norms of thought have the great significance for human knowledge which we have claimed for them above, they will point the way to final, absolute truth. This is at least true if it is not merely a question of norms of thought for particular, single individuals, but on the contrary such as are valid, so far as we may be able to judge, for all normal human thinking—not merely for the particular individual's consciousness but, so to speak, for the race consciousness of humanity. And again, further than this, what is valid of these norms of thought will also be valid of the other spiritual and mental potentialities of mankind—the religious, the ethical, and the æsthetical potentialities—in so far as they

are shown to be necessary presuppositions for a normal participation in the sphere of life which is in question.

Thus philosophic reflection finds the greatest variety of opportunities for striving to go beyond the separate spheres of the exact sciences, and to approach final truth without running the risk of becoming mere speculation and arbitrary construction.

Among recent philosophers those who felt that they could not be satisfied with the strictly positivistic point of view as final have defined their task in this sense. But they are distinguished from the purely speculative thinkers of the Schelling-Hegel type by two fundamental characteristics. First, they do not ignore or disregard the exact sciences and empirical knowledge, but on the contrary they *presuppose this empirical knowledge as a necessary basis.* Second, in accordance with this, they do not claim *absolute validity* for what they assert, but hold it subject to the unceasing check and criticism of wider experience.

Fechner (died 1887) and *Friedrich Paulsen* (died 1908) so defined the task and working methods of modern metaphysics—for thus this second field of philosophy is designated. But metaphysics as here defined is not absolutistic and deductive, but inductive and conscious of its limitations and its provisional character.

But on the basis of such principles the problem may still be dealt with in two very different ways,

according to whether the *phenomena of nature and their interpretations* are taken exclusively or at least preferably, as the starting point and basis for philosophic reflection, or whether the spiritual life and its history are also taken into account. In the first case we get a *materialistic-naturalistic* and in the second an *idealistic* philosophy.

From this it follows at once that the idealistic philosophy will be the only one capable of taking into account not merely positive knowledge and the results of investigation, but also those inner guides which are to be found in the religious, the ethical and the æsthetical consciousness, as well as in thought. But idealistic philosophy in its turn will exhibit highly significant differences according to the manner in which and the extent to which these inner guides are brought into play.

Ernst Haeckel, the zoölogist of Jena, is today the chief representative of a *materialistic-naturalistic* philosophy and world-view. He is often mentioned of late on account of his "Riddle of the Universe," a book which has a distinct bias, and which, in the historical part, is filled with mistakes and misunderstandings of the worst sort. However Haeckel undeniably deserves credit for his work in applying the doctrine of evolution to the organic world, which he carried out with a certain intuitive originality. But even within the domain of his own specific science he is not free from diverse exaggerations and premature conclusions, and hence he is to blame for the fact that very recently some nat-

ural scientists have, in contrast with him, returned to a one-sided and radical rejection of the whole doctrine of evolution.[9]

Next to Haeckel I place *Wilhelm Roux*, founder of the so-called theory of mechanical evolution. He has had a great influence among physicians and natural scientists in the dissemination of a mechanical world-view. Compared with Haeckel's his work is thoroughly scientific and reliable.[10] I also mention here some other natural scientists because they have worked on the doctrine of evolution and its application, although they have not definitely stated their position on the really philosophical questions, namely:

Weismann, biologist of Freiburg, who has developed the Darwinian theory most consequentially,[11] *Nägeli*, formerly botanist in Munich,[12] and *De Vries*, botanist, important on account of his so-called theory of mutation, a significant modification of and supplement to the theory of Darwin.[13]

In contrast to these there are some contemporary natural scientists who have taken a decided interest in philosophical problems, namely: *Ostwald* of Leipzig, the most zealous advocate at present of a philosophy based on natural science, and editor of the "Annalen der Naturphilosophie," [14] *Driesch*, of Heidelberg, the champion of the so-called neo-vitalism,[15] and *Reinke*, botanist in Kiel, who in recent years has expressed himself on several occasions very emphatically to the effect that it is unjustifiable to draw materialistic-

atheistic conclusions from the achievements of modern natural science.[16]

The representatives of idealistic philosophy, especially important from our point of view, are the following:

Von Hartmann. He is well known as the philosopher of the unconscious. Among his followers *Arthur Drews*, of Karlsruhe, is especially prominent by reason of his acumen and scholarship. He has attempted to harmonize the philosophy of von Hartmann with recent scientific and philosophical principles and results, and he has directed his attention especially to the problem of the relation of the philosophical to the theological world-view.[17]

Baumann, of Göttingen, has attempted to establish ethical and religious ideas on the basis of the exact sciences.[18]

Höffding, of Copenhagen, well known for his ethical and psychological works.[19]

Wundt, the well-known psychologist and founder of the "Psychological Institute" at Leipzig, in addition to his exact psychological investigations has never ceased to be interested in the fundamental problems of all the philosophical disciplines. Among his numerous pupils *Oswald Külpe* must be especially mentioned.[20]

Paulsen (see above), apart from his philosophical works, is especially important for us because of his having brought out clearly and emphatically the connection between Kant's philosophical mode of thinking and the spirit of Protestantism.[21]

William James.[22] Not only are Wundt and Paulsen closely related to one another but they are both similar to James, the three being the chief representatives of voluntarism—the philosophy of will. Wundt and Paulsen are also closely related on the other hand to Fechner, the founder of psycho-physics.[23]

Eucken, of Jena, has laid great stress on the duty of philosophy to take a definite stand in the fight for religion.[24]

Wilhelm Dilthey (died 1911), must be credited with having set forth most convincingly the distinctive character and the independence of the mental and moral sciences in contrast with the natural sciences, and with having brought about the general acceptance of this contrast. At the same time, he has taught us to take into account the facts of the religious life, and has thrown light upon its problems. We are indebted to him for the best work on Schleiermacher. Finally he advocates the "Idealism of Freedom," as exhibited in the Christian religion and the philosophy of Kant, as one of the possible world-views.

Besides Dilthey, especially *Windelband* of Heidelberg (died 1916) and *Rickert* of Freiberg are striving to establish a philosophy of history and culture.[25]

Herbert Spencer (died 1903), the most important English philosopher of the nineteenth century, endeavored to bring together the three principal trends of modern philosophy mentioned above.[26]

For our purposes these are the most important representatives of the philosophy which, in the narrowest sense of the word, may be designated modern philosophy. But the Hegelian philosophy still has its advocates. They have rendered a most valuable service in keeping before the present generation the tenable features of that earlier epoch. Because of his acumen and breadth of insight, *Adolph Lasson*, of Berlin, ranks first among these Hegelians.

It is of course impossible for me to expound singly here the positions of these various thinkers toward the Christian belief in God. I shall, therefore, select only such of them as are important in any particular connection, considering them in larger or smaller groups according to circumstances, or, when necessary, referring to a particular one of them.

Chapter Two

Epistemology and the Christian Belief in God

NOW how does the Christian belief in God meet the general view and position of modern philosophy just outlined?

Undoubtedly this belief aims to be something entirely different from a merely intellectual insight and a merely intellectually established world-view. Its deepest roots do not lie in rational understanding and thinking. On the contrary, it is grounded in those basic potentialities of the human soul which are specifically religious. While these religious potencies are closely connected with the æsthetical, and especially with the ethical aspects of mind, and are correlated with them in a great variety of ways (especially with the latter), yet they are not identical with them, but possess a peculiar and independent significance.

But does not the realization of this fact itself suffice for the modern man to condemn faith in God? For will he not be compelled to point out, and indeed rightly so, that the emotions are, to be sure, a "very aimable, but at the same time a highly dangerous brain function," and that they have absolutely nothing to do with knowing the

truth. Haeckel, at least, thinks that this disposes of the whole question.* But do such views really prove him to be a modern man, if this expression is to be used in a just and proper sense, or do they not rather prove him to have lagged behind contemporary thought? Does not such a verdict characterize that attitude of mind which can only appreciate the intellectual side of man? The further fact that Haeckel without further ado converts the psychical into a brain function, not claiming simply a definite connection between them or a definite relation of each to the other, but holding them to be identical, shall here be left out of consideration. But is not such exclusive attention to and appreciation of the intellectual powers taken in the narrower sense, a onesidedness which is especially out of place in the modern man, who should take into account the whole of reality in its widest scope? If the modern man boasts of his "sense of reality" as an attainment left for him to achieve, then he should also feel himself logically bound to follow this "sense of reality" without prejudice, and he should not call it to a sudden halt the moment it begins energetically to protest against his preconceived opinion. The fact is that there are other psychic forces, phenomena and activities besides the purely intellectual which belong to the full reality of the human soul! To be sure all hasty misinterpretations of this fact

* *Cf.* "Riddle of the Universe," Ch. II. "Wonders of Life," Ch. V.

must be definitely rejected. But from the very outset the fact itself must be taken into account and fully appreciated. And that means that the unique function and importance of these other psychic forces and activities must be recognized.

The attitude of onesidedly excluding and rejecting, as a matter of principle, the phenomena of the religious psychical life was possible for purely intellectualistic rationalism, but, if it is not wantonly to set aside its own principles, the "sense of reality" of modern thinking must not take such an attitude.

From the same point of view a protest must be raised against those who only consider the religious life in its relation to moral conduct, and accordingly completely subordinate religion and faith in God to ethics. This, too, is a onesidedness which fails to give full play to the sense of reality, even though the connection between the religious and the ethical forces is in fact close and important. To be sure, the thinkers in question are somewhat justified in referring to Kant for this way of viewing and dealing with the matter. But just at this point we are confronted with a narrowness in Kant's philosophy which is clearly based upon a limitation of his whole nature and personality. For, with all the loftiness and energy of his moral will, he was after all dry and pedantic, and this is one of his peculiarities which the "modern" man should not imitate. In his article on Kant's personality, Bauch justly writes: "When all man's acts are

subjected to reflection the purely emotional side of his life is necessarily restrained and hampered. Kant did not escape this experience in his own life. Though it was not a necessary consequence of his ethics, the imperative of the practical reason, owing to Kant's personal bent toward an extreme interpretation, was exaggerated until it was made into what we commonly call a rational, in the sense of intellectual, principle. Hence Kant himself prevented the purely emotional side of his nature from attaining complete expression and development, and this very fact made it impossible for him to understand the universal significance of this phase of human life." * What Bauch here says of Kant's inner life as a whole is especially true of its religious side. Moreover, Kant himself did not, as a matter of fact, consistently carry through the subordination of religion to morality. However little cultivated and developed, his own religious consciousness protests against a consistent development of his exclusively ethical theory of religion, and, at least between the lines, religious faith is permitted to speak for itself. Over and over again his characterization of our moral disposition has a strictly religious coloring. Thus, for example, he writes: "There is, however, one thing in our soul which, when we take a right view of it, we cannot cease to regard with the highest astonishment, and in regard to which admiration is right or even elevating, and that is the original moral capacity in us generally."

* Kantstudien, IX, 1904, p. 205.

And a little further on he adds: "And even the *incomprehensibility* of this capacity, a capacity which proclaims a *Divine origin*, must rouse man's spirit to *enthusiasm*, and strengthen it for any *sacrifices* which respect for this duty may impose upon him." * This clearly implies that ethical matters fall under and are subordinate to the domain of religion, and not the reverse! For here the moral will is given depth and impetus by being brought into relation with the "incomprehensible," into relation, that is to say, with the to us mysterious world of the "beyond." And this is a relation that is decisive for the trend and tendency of the religious consciousness.

Considering the question on its own merits, there can be no doubt whatever but that every attempt to exhaust the meaning of religion by subordinating it to ethics does violence to the full reality of the life of the human soul as it really is. We need only to recall the characteristic features of the religious life already mentioned. The consciousness of the meaning and depth of the world, the soul's longing for eternity while in the world of temporal and passing phenomena, its optimism persisting through any misfortune or disappointment—all of these facts of actual human experience really become meaningless when considered solely from the point

* Religion innerhalb der Grenzen der blossen Vernunft, 2nd ed., p. 57 and p. 59. The words emphasized by Dr. Wobbermin show the special aspects of the religious mood. The English is taken from Abbott's translation of Kant's ethical writings. *Tr.*

of view of ethics. They are given various interpretations but their proper import as facts of experience is never admitted. Now after all, if it is a fact of the greatest importance that Kant taught us to take into account these moral forces of the will which man feels in his inmost soul, as contrasted with the one-sided attention to the activity of the intellect and to rational knowledge, and if he laid the most emphatic stress upon the independence and the intrinsic importance of this moral will (even the most highly developed intellect conceivable cannot, according to Kant, vouchsafe even the slightest degree of ethical consciousness), we shall merely be drawing a necessary conclusion from his own position if we demand a similar recognition for the manifestations of religious feelings.[27] And modern philosophy must all the more admit the justice of this demand since, in going back to Kant, it insists upon an unprejudiced recognition of the whole reality of experience.

But do not most serious considerations against the attempt to establish a place for the Christian belief in God within modern thought arise from another, and in fact from the most decisive and fundamental point, in the Kantian philosophy? If we really take Kant's critical philosophy seriously must we not either wholly renounce faith in God, or, in any case, relegate it to the domain of pure imagination, where all the standards of reflective thought and rational deliberation are entirely lacking? Both of these positions have been and are

still being maintained, but critical thinking in the sense of Kant certainly does not lead to either.

It is true that Kant's philosophy intends to be critical philosophy, and all thinking—at least all scientific thinking—should and must be critical thinking today. It must not be allowed to relapse to the low level of pre-critical and uncritical thinking. From a protestant point of view there can be no serious difference of opinion, even among theologians, on this point. But the philosophy of Kant, as well as all other thinking, gets its critical character by going back to, and by a deliberate examination of, *the fundamental conditions of knowledge*. In order to reach the first and fundamental decision as to the value and validity of human thinking, Kant directed attention away from the object of knowledge to the subject of knowledge, and he thereby became the great reformer, or, as he himself expressed it, the Copernicus of modern thinking. For there had dawned upon him the momentous idea, which, after all, is quite simple and almost obvious, that objective knowledge presupposes not merely objects but also the understanding itself, as the cognitive function of the human mind or of human consciousness.

It then follows, however, that the results attained through the understanding must be dependent, not merely upon the material furnished to the understanding, but upon thinking itself—upon the constitution, so to speak, of the faculty of thinking. Let me use a very crude illustration to make this

clear. The nature of machine-made products, for instance knit goods or cloth, depends not merely upon the raw material fed into the machines, but also upon these machines themselves—upon the way in which they distribute the raw material and arrange and combine its various elements. Quite similar conditions must prevail for the human understanding. Indeed, a knowledge of the nature of the machine is the primary and indispensable basis for any opinion as to the merits of the product which it turns out. The same raw material may yield products differing widely in quality and value when different manufacturing processes are applied to it, inasmuch as the distribution of this raw material, the reassembling and composition of its various elements may be carried out in very different ways. Only a knowledge of the machines themselves will enable one to understand this difference in quality and value, for only such knowledge will show how it is possible to turn out the various products. And again it is the same with the human understanding. If we would discuss the meaning and value of human knowledge, we must first of all get a clear idea concerning those fundamental conditions of knowledge inherent in the human mind itself. Kant called them the *a priori* moments of knowledge. Thus he directed attention away from the objects of knowledge to the subject of knowledge, and to the conditions of knowledge inherent in the latter, or, to put it more exactly, to the conditions of the possibility of knowledge inherent in the sub-

ject. In doing this Kant brought about a revolution in thought, for he attacked the problem from a fundamentally new position, reversing the rôles of object and subject, just as Copernicus had reversed the relation between the earth and sun of the naïve Ptolemaic cosmology * (which, to be sure, does not deny that the sun itself may move).

Now this fundamental principle of the Kantian epistemology presents a case altogether like that of the egg of Columbus. When once it has been grasped, and its fundamental meaning comprehended, it becomes the most obvious platitude. But really to comprehend it fully and in its final meaning is indeed a matter of no little difficulty. In fact, those naïve habits of thought, which, before any attempt is made to think "critically," have become flesh and blood of every human being, must be completely overcome. How difficult this may prove, even for highly educated men engaged in scientific research, is shown by Haeckel's absolute inability to surmount these naïve habits of thought. In his "Wonders of Life," published in 1904 to supplement his "Riddle of the Universe," he attempted again and again to refute the objection raised against him from many sides that his philosophy, as set forth in the "Riddle of the Universe," lacked an epistemological basis. Nevertheless he persists, throughout and from the very outset, in the decisive error of dealing with knowl-

* See the "Critique of Pure Reason." Preface to the 2d ed., p. 16.

edge solely from the objective side. Claiming the authority of Kant and referring to the latter's bringing of experience and thinking into relation with one another, he writes, for example: "The external world is the object that acts on man's organs of sense, and in the internal sense-centers of the cortex of the brain these impressions are subjectively transformed into presentations. The thought-centers or association-centers of the cortex (whether or not one distinguished them from the sense-centers) are the real organs of the mind that unite these presentations into conclusions. The two methods of forming these conclusions—induction and deduction, the formation of arguments and concepts, thought and consciousness—make up together the cerebral function we call reason." * Haeckel then emphatically claims that the recognition of these propositions is the "indispensable prerequisite to the solution of the riddle of the universe." As such, he points out, he had been recommending these "fundamental truths" (!) for thirty-eight years, but that, unfortunately, they were still far from finding such recognition. As a matter of fact this summary of so-called "fundamental truths" is a veritable maze of distortions, unestablished sophisms and fallacious deductions. To mention only the main point: considered from the point of view of epistemology as a critique of the understanding, the cognitive centers or association areas of the cerebral cortex are, of course,

* "Wonders of Life," p. 4.

quite as objective as all other objects of the external world. For as parts of the cerebrum they are certainly not acts of the understanding but in fact objects of it.

Haeckel blinds himself to this truth by making a distinction between "monistic" and "dualistic" epistemology, claiming that he alone advocates the correct, that is to say, the monistic epistemology, and that his opponents represent the false dualistic theory. Thus he fails to recognize the fact that the theory of knowledge or critical epistemology can and ought to be neither dualistic nor monistic, but that it must be critical epistemology and nothing else, that is to say, a critique of the understanding as such. For otherwise it would not enter upon its task without prejudice, but would presuppose the result as a dogmatic postulate. In fact, the whole of Haeckel's so-called monistic theory of knowledge or critical epistemology is neither theory of knowledge nor critical epistemology at all, but pure dogmatism (of a naturalistic kind, however, whereas traditional dogmatism is supernaturalistic). At the beginning this dogmatism contains potentially the whole metaphysics of naturalism, and it takes for its starting point and as the basis of operations what, in any case, could only be the conclusion.

Reference to the genesis of the cognitive faculty of the human mind serves Haeckel as a final means of defense. He asserts that the great mistake of Kant was that he failed to take this genesis into

consideration. "Kant had no suspicion of the evolution of man's soul from that of the nearest related mammals. The curious predisposition to *a priori* knowledge is really the effect of the inheritance of certain structures of the brain, which have been formed in man's vertebrate ancestors slowly and gradually, by adaptation to an association of experiences, and therefore from *a posteriori* knowledge." * Here Haeckel fails completely to appreciate what is really involved, and substitutes for the problem of epistemology an entirely different one, having simply nothing to do with that problem. Moreover, his statement that Kant did not think of this possibility of a gradual evolution of the mental capacities is absolutely false. But Kant saw that the epistemological problem, at least in its decisive and essential points, cannot be solved by starting from that basis. For the epistemological problem concerns human thinking as distinguished from all other forms of consciousness known to us. The characteristic features of *this thinking or understanding* must be investigated and criticised. But as to what process this capacity for understanding has come into existence—that is a question belonging to an entirely different field of investigation, a question whose study may indeed indirectly further the study of the epistemological problem, but whose solution in one way or another neither gives nor can give a direct solution to this epistemological problem. Let me

* *Op. cit.*, p. 11.

refer again to the machine illustration. In passing judgment on the products it makes no difference whatever how the machines in question came to be devised—whether this came about by a lucky chance, or through an ingenious intuition, or by utilizing devices already known, or by concentrated reflection directed toward constructing machines for the purposes to be attained. In spite of very different ways in which machines may be produced their construction may in all cases be the same, so that products of the same kind and value are turned out. But it is also possible that the machine discovered entirely by chance may turn out better products than all other machines, and of course the reverse may be true In short, every imaginable case between these extremes is possible, and many examples could actually be cited from practical life. As a matter of fact, *the origin and history* of the machine are of no consequence in passing judgment upon what it makes. The main point is to know *the principles upon which it is based and the details of its construction.* And in dealing with the human faculty of understanding we have a closely analogous situation before us. However it may have come into existence, it is in existence, and it must first of all be understood and be dealt with on the basis of its own inherent properties.

Thus, from every point of view, Haeckel's own so-called monistic theory of knowledge, and his opposition to the Kantian theory of knowledge

proves to be untenable, non-critical and dogmatic. And this is the basis upon which he would prove that the Christian belief in God is out of date and inconsistent with modern thought! His charge reverts upon him with redoubled force.

Let us return, then, to the critical position of Kant. To the short sketch already given we must first of all add, as an immediate consequence of this position, that scientific knowledge must be strictly limited to the domain of possible experience. Human understanding does not extend beyond the limits of such experience since it consists in nothing but a working over of material furnished by experience. And, in the second place, it must be added that Kant's efforts are directed toward ascertaining the inner structure of the human understanding which forms the basis of all normal human knowledge. For him the main point is not to investigate the conditions of knowledge as they exist more or less accidentally for certain isolated individuals, but to study those which hold for human consciousness quite generally. Hence everything pertaining merely to individual cases in an accidental way must be deliberately excluded. Kant assumes that the characteristic and distinctive features of the faculty of the understanding, which remain after such an exclusion, are of a super-empirical nature, grounded in the universal reason of things, and that, on their part too, therefore, they direct attention to this reason. Thus, in his opinion, they are connected

with the final and highest truth—with that primordial reality which is the *fons et origo* and ultimate goal of all that is and of all that comes to pass.

And in this, too, we shall have to agree with Kant, at least to a certain extent. For if the world and human life mean anything at all, if we human beings are not born merely to live in error, and the world in which we live is not simply a great and empty delusion, we must assume that those fundamental characteristics of the faculty of understanding or reason exercised by man, which really prove to be universally valid conditions of normal human understanding, can in fact claim a super-empirical validity precisely to the extent that they prove to be such universally valid conditions of normal human understanding, and that they direct us to final and absolute truth. To be sure this is a circular argument But as human beings we cannot avoid this circle. Strictly considered we remain subject to it even though the particular individual can disregard it for himself. Nor can we compel that man who denies, as a matter of principle, that there is any possibility whatever for man to approach the truth to admit the conclusion that we draw from the opposite conviction.

But although we can agree with Kant thus far, we must, nevertheless, raise strong objections to the further development of his basic thought, and we must insist that a revision of it is indispensable.

First of all, this even applies to Kant's attempt to establish once for all by an abstract logical

process those *a priori* characteristics of the human understanding. Such an attempt conflicts with the whole unbiased sense of reality since this sense of reality must not, once for all and from the very outset, be closed to any possible new experiences. To be sure, logic, conceived as a closed system of human norms of thinking, is consistent and valid beyond a quibble, but the logical thinking of the race, bound as it is to experience, is, like all human life itself, subject to historical development. *A propos* to a detailed development of the basic idea of Kant's critical philosophy, we must, therefore, insist upon the two points above asserted to apply quite generally, namely: unflagging regard to the material furnished by experience, as it is given to us by history and psychology, and accordingly, repudiation of the absolutistic attitude.

This leads to another matter. In discussing Kant's critical philosophy or *A priorism* we have thus far always considered only the faculty of understanding of the human mind, cognition and its exercise. We did this, first, in order to be as clear as possible, and secondly, because Kant himself started from here and always had a special interest in this side of the problem. But all of what was said above holds by no means only of cognition or of the intellectual activity of the mind of man, but it holds of his *whole mental life and his whole mental activity*. The ethical will, the æsthetical feelings and the religious consciousness must all be given the same consideration. But even in this

respect Kant was led to a somewhat narrow view. Religious matters he usually put decidedly into the background, and æsthetic matters were not always given the consideration which their importance deserves. Thus there remained for him, as the main subjects to be considered, only cognition and ethical volition—the theoretical and the practical reason, as he expressed it. After isolating these for purposes of comparison he exaggerated the contrast between them. He brought out clearly the characteristic differences between these two modes of activity of the human mind, but he did not sufficiently elucidate either the fact that, after all, they belong together, or the fact of the correlations between them. To be sure, he classifies both under the common concept of reason—theoretical and practical reason, thus making it very clear that, even from the point of view of critical philosophy, the final aim is not to tear them asunder, but to establish more firmly the fact that they belong together (only on the basis, of course, of the preceding critical distinction between them). Nevertheless, with Kant the view that these two spheres are entirely different and have nothing to do with one another often preponderates. And since he simply subordinates the religious consciousness to the moral will, this contrast is considerably intensified when a determination of the relation between knowledge and religious faith is sought.

Consequently it may seem to be a necessary result of critical philosophy simply to put belief

in God outside the province of thinking reflection, and to relegate it to a sphere in which rational thinking has absolutely nothing, either negatively or affirmatively, to say. As a matter of fact this was not Kant's own position, and least of all was it so in his later years when he sought to sum up the results attained by critical philosophy.[28] But owing to the one-sided limitations of his position already pointed out, he certainly did furnish ground for such a view. These limitations we must, therefore, deliberately seek to overcome, and we must do this by developing the fundamental idea of critical philosophy in all its aspects.

Hence we must indeed distinguish between specifically scientific reasoning and inner convictions together with interpretations of nature and history, dependent upon and not entirely separable from these inner convictions. But even though such interpretations differ from scientific conclusions and demonstrations, nevertheless they can and must themselves be made the subject of scientific reflection, and the positive value of such interpretations may be shown to vary greatly. By scientific reflection it is possible to set up a descending or ascending scale of groups of such interpretations and convictions, varying in importance and scope.

It will not do, then, to try to solve the chief problem of theology—the relation between faith and knowledge, between belief in God and philosophy—by means of a mere delimitation of bound-

aries, simply by drawing a line and saying: "Here we cannot cross over, but neither may you cross over to us." To begin with, our opponents will not submit to this. And we must grant that this attitude is not altogether wrong. To be sure, in dealing with these problems it is highly important and necessary to take into consideration the limits of human thinking and knowledge, to proceed in fact, with epistemological objectivity. But all of those questions and problems, in respect to which knowledge and faith in God seemingly or in reality come into conflict, must be considered, and the position held on the part of faith in God must be justified. This is necessary, too, because, in the last analysis, epistemology itself is not independent of the sum total of human thought and knowledge. In every instance, indeed, it must stand above the whole of knowledge, but it cannot do this except by taking this very knowledge as a basis, and hence it remains bound to the latter after all.

The conclusion of all this seems to me to be that beside the watchword: "Back to Kant" we must also put: "On from Kant!" Only in conjunction with the second is the first really justified. But, to be sure, we must start from Kant and not otherwise. After all, therefore, first: "Back to Kant!"

In the light of experience it is not probable that all the mistakes of the Schelling-Hegel speculative philosophy would be avoided as an immediate consequence of proceeding from the motto: "On from Kant!" We shall be able to point out many

instances of similar mistakes in present-day philosophy. I am sure that such are to be found in my own writings. But the mistakes will be less serious, and, since, therefore, the deviations from the path leading to all scientific progress will become less, it will be possible on the whole to make a little headway toward the goal.

In seeking to uphold the Christian belief in God in a systematic and philosophical way, it is not admissible to use the general philosophy of Kant as a basis. For Kant opposed the traditional attempts of this sort in detail, and, at least according to the opinion prevalent among theologians today, he disposed of them conclusively. These traditional attempts consist in the so-called proofs for the existence of God, and these proofs have almost entirely lost standing in theology of the present day. But to be frank, I cannot bring myself to accept this unfavorable verdict completely and without further comment. The motives and tendencies, upon which the principal forms of these proofs are founded, contain, it seems to me, significant elements of truth which are of permanent value. Indeed it is my firm conviction that we can today, by reason of the present stage of our knowledge and understanding attach to these motives and tendencies a far greater demonstrative force than was possible for the theologians and philosophers of the past.

But in the nature of things two groups of these arguments must be distinguished. One group is

based upon the study of nature and the natural sciences, while the other has to do with the mental life and the mental sciences. Now if my aim were to establish the Christian belief in God on positive philosophical grounds (in the sense explained in detail above), I should, at least in my opinion, have to put the emphasis entirely upon the second group, and I should have to proceed from the reflections which are based upon inner experience as the starting point. But my task is rather to discuss the positions held and the results attained by current philosophy. And from this point of view I must begin with the first group, since only with respect to this group can current philosophy be said to have anything like consistent positions, or to have attained consistent results.

Of course, all these proofs are untenable in their traditional classical form. For in this form Kant's criticism demolished them.

Chapter Three

Cosmology and the Christian Belief in God

THE classical form of the cosmological argument operates with various nuances of the thought that from the world as the effect God as cause is a necessary conclusion. Since for every effect a cause must be presupposed, by rising higher and higher from cause to cause, a highest and last cause—God, must finally be reached. Hence the decisive principle of proof here is the law of causality. It is conceived as a supreme and absolutely valid cosmic law to which the universe must conform. I have mentioned this classical form of the argument just because the principle of causality, upon which it is founded, directs attention to that problem which is of the greatest importance for the whole question. For all the more specific laws of nature fall, as special cases, under the law of causality, but in the cosmological argument we have to do with a world constituted according to these laws.

Let us first consider the law of causality purely on its own merits. That hypothesis is false which says that this law *possesses a validity in and of itself, and that it is an absolute and supreme universal law,* to which the whole universe must necessarily con-

form. Hence the conclusion that there is a highest cause is untenable. The law of causality compels us to seek a cause for every effect, and does not permit us to stop anywhere in this process. Thus in using this law of causality we do not reach a highest and first or original cause, but are involved in an infinite series—a *regressus in infinitum.* I have stated that the other conception of the law of causality, set forth above, is false. We may say that today it is no longer held in science or philosophy, although we shall see that it is still brought into play to a certain extent. Apart from these exceptions, which I shall presently mention, I may refer to all the philosophers cited in Chapter I for the following discussion.

The principle of causality maintained by scientific philosophy today is a different one. As its starting point it takes the fact that we can only note, by direct observation of nature, a succession of two or more events, and never a real causation in the sense of an active influence from one event to another. As a result of our inability to observe the actual connection, some philosophers have actually sought to reduce causality to the unfailing succession in time of one event upon another. Hume led the way in holding this view, and so-called positivism has often taken up this thesis of Hume. But it, too, is false because it is one-sided and insufficient. For we only speak of causality when we look upon the occurrence of the consequent event in question as necessary. This characteristic of

necessity forms an inseparable and an essential part of what we consider to be causal connection. We assume a causal relation between an increase of temperature and the rising of the mercury in the thermometer, because we have a preconceived idea that this rising necessarily follows from the increasing temperature. This is the concept of causality of present-day philosophy. It asserts a necessary connection between two successive events. In order to prevent confusing it with the mistaken interpretation mentioned above, philosophers prefer to express this modern concept of causality in terms of the mathematical concept of function. Modern mathematics designates as a functional relation any relation between two quantities such that a change in the value of one necessarily involves a change in the value of the other, or, to put it differently, that of two variable quantities one represents the independent variable, and the other the variable dependent upon the independent variable, or simply the dependent variable. Accordingly the modern concept of causality can be expressed by the formula: e = f (c), which means that the effect stands in a functional relation to the cause—in the relation of a necessarily dependent variable.

This consideration, and especially the reference to the mathematical analogy, proves that the law of causality contains a *subjective* element. For this characteristic of necessity cannot come from experience. Experience knows only particular occur-

rences and events—particular facts, but no necessity. When, in spite of this, we mean by a causal relation the relation of necessary connection between two events, this necessity must be introduced or assumed by us. From this point of view, therefore, the law of causality is nothing but the fundamental hypothesis made by us for the scientific study of natural phenomena. And for this reason the classical cosmological argument is untenable. But this insight immediately leads further. I have already pointed out that all special laws of nature can be regarded as special cases of the causal law, since the latter is the most general law of nature under which all others are subsumed, and to which they are subordinate. Consequently all natural laws must be treated like the causal law. None of them can claim an absolute objective validity because all contain a *subjective* element.

Now this is of prime importance in dealing with those representatives of a materialistic philosophy who use these very laws of nature in arguing against faith in God. Haeckel is the chief of these. There are no absolutely binding laws of nature in the sense of expressing norms of the objective world-order which are valid in themselves and unalterably fixed. Haeckel holds a position which must today be considered unscientific when he brings up this conception of the laws of nature, with the corresponding conception of the law of causality in particular, against faith in God. Not only philosophers, but also the more discerning natural

scientists, have ceased to hold this view which Haeckel advocates. Among the latter, Ostwald, in his lectures on natural philosophy, has recently laid special stress upon the fact that laws of nature must not be looked upon as decrees but merely as reports. They do not decree what shall come to pass, but merely give an account of what we can observe and bring under a comprehensive conception. And, in fact, this is the only conception of laws of nature which is scientifically useful and adequate.

After all, however, this does not dispose of the question as to what the laws of nature are. As we saw, they contain a subjective factor, yet, on the other hand, *they are by no means purely subjective.* Let us again consider causality. To be sure, the necessity which we attach to whatever takes place in accordance with the causal law depends upon our way of looking at things. But the causal connection itself is not put or interpreted into nature solely by us. On the contrary, it must somehow be in nature objectively, or, to formulate the matter more carefully, there must be in nature itself an objective basis for our considering the causal law to hold. For, as far as we are concerned, without this assumption the whole course of the world would at every moment be reduced to mere chance. It is indeed a most astonishing fact that the stone thrown into the air for a million or even a billion times falls back again, but we could not, simply from this, deduce the least probability that this

would be the result of the billion and first or any other new instance, unless, at least in a broad general way, we presuppose the existence of a fixed order of things, so that from the greater or less number of cases we might conclude, with a greater or less degree of probability, that there is such an order in this particular respect. Nor, unless we assume the objective existence of a fixed order of things, could we with any degree of probability, assume for the next moment of time that with an increase of temperature the mercury would again, as always in the past, rise in the thermometer. Only upon the basis of the hypothesis of an objective existence of a fixed natural order is there any probability for this assumption, just as in mathematics we speak of probability only when a limited number of variables is given. The probability of drawing a definite one from an infinity of chances is one to infinity (∞), that is, there is no probability.* Thus, for every subsequent moment of time, the probability that the stone thrown into the air would again fall to earth, that with an increase in temperature the mercury would again rise in the thermometer, that the earth would again turn on its axis and revolve about the sun and would continue with the sun to move through space—in these and in all similar cases the probability would be

* ∞ is the mathematical symbol for infinity. For readers who are entirely unfamiliar with the principles of the theory of probability, we may note, that the probability of drawing a particular one of six chances is one to six ($\frac{1}{6}$), since six chances are possible and only one of them will give the desired result.

one to infinity or nothing, if we did not assume a fixed order of nature.

These considerations make it possible for us to make a final estimate of the laws of nature as a whole, so far as such an estimate is important in the present connection. These laws are based upon a process of abstraction on our part, for we arrive at them by contemplating reality under certain definite points of view and from specific angles, while intentionally leaving other points of view out of consideration. In this sense the laws of nature contain a subjective element. Moreover, these laws of nature do not possess an absolute validity—a necessary validity in and of themselves, for they hold only for the present world—the world as we know it. However, with respect to this world the laws of nature indeed point to rules actually holding for the course of nature itself, and particular ones of them can be brought to a greater or less degree of probability. In fact, some of them, as for instance the law of falling bodies, the law of gravitation, and others, have already attained a force of the highest degree of probability.

Let us now return to the cosmological argument. We have found that seeking to deduce a highest cause by means of the law of causality, is founded on a misconception. On the other hand, when we do not base the cosmological argument on detached natural phenomena and on the course of nature in particular instances, but subject the whole course

of nature to thoughtful reflection, do not the actual actions and reactions as well as the correlations of finite individual beings and events compel us to assume a transcendent being, standing above this whole complex of actions and reactions, and making their harmonious interplay comprehensible? Before answering this question let us recall, by means of a few examples, what we know today concerning the objective logic of the course of nature.

Above us arch the starry heavens. Since the days of Galileo modern astronomy has increased the number of known heavenly bodies beyond all bounds. Ranging from the first to the tenth magnitude more than a hundred thousand fixed stars are known today, and many of these are probably surrounded by a greater or less number of planets. The milky-way, the equatorial belt of our system of fixed stars, has been resolved into millions of suns, and beyond these appear other systems of world-nebulæ and of milky-ways. We no longer imagine the vast multitude of fixed stars to be firmly attached to a great hollow sphere, because we know that all of them move through space with enormous velocity. And we know, too, that the same constellations which we see today were seen by the Babylonians and the Egyptians, or by the author of the ninth verse of the ninth chapter of Job. How astounding is the order and regularity exhibited by the movements of these heavenly bodies! Especially when we remember that the

heavens, as they greet our eyes at a given moment of a star-lit night, represent many different epochs of the history of the universe. For while, as is well known, the rays of light coming to us from the sun tell us of its existence eight minutes previously, those coming from the north star, for example, tell us of its existence thirty-five years previously. We know the laws in accordance with which the planets revolve about the sun, and the satelites around the planets, so that by calculation we can determine eclipses of the sun and moon very accurately for centuries past and for centuries to come. Our knowledge of these laws is such that the existence of a planet heretofore unknown, Neptune, could be established *a priori*.[29] We know the laws of light in the universe, towit, that the intensity of light diminishes inversely as the square of the distance increases, and we know that the velocity of the transmission of light varies with the density of the medium but remains constant for the same medium, and we know the various velocities. We know that the intensity of an electric current is directly proportional to the electro-motive force, and inversely proportional to the resistance of the conductor. By the law of degradation or conservation of energy, discovered simultaneously but independently by Robert Mayer and Helmholz, we know that all agencies of the material universe—mechanical motion, heat, light, chemical and electrical processes—constitute a great and connected system of nature, in which forces or energies of one

kind are continually transformed into absolutely equivalent forces or energies of another kind.

Obviously, then, an *objective mathematical logic* prevails in the world, even though our calculations and conceptions represent merely a system of symbols pointing to an actuality whose real essence is absolutely inaccessible to us. Taking up an idea due to Laplace, Dubois-Reymond, in his well-known lecture "Uber die Grenzen des Welterkennens," says that a stage of our knowledge of nature is conceivable in which the whole process of nature would be represented by a single mathematical formula, by a single infinite system of differential equations, from which the position, the direction of motion and the velocity of every atom in the universe would be deducible at any moment of time. This statement, however, goes beyond the limitations of our knowledge of nature inasmuch as it creates the impression at least, that we are here concerned with an absolutely established order of the universe as such. We have clearly seen that this is out of the question. However, when the statement is limited as indicated it holds true.[30]

Now what follows from all this? The existence of a personal God? By no means. Or at least the reasonableness of belief in a personal God? This, too, is not immediately necessary. But less pretentious results are not valueless. Expressed in the most general terms, and hence with universal validity, it follows that every complete and comprehensive philosophical view must assume or

accept a consistent prime cause of the universe. This makes materialistic atheism philosophically meaningless, if we interpret the word atheism in the strict sense so that it is opposed to every form of pantheism as well as to theism. This is the first result at which we here arrive: *strict atheism is philosophically meaningless and untenable.* Today the great majority of philosophers admit this. Mach's contrary view is based upon his epistemology, an epistemology which is closely related to that of the empirio-critical philosophy. On this basis he acknowledges only a mere economic value of the so-called laws of nature. Just as every distinction between subjective and objective is unwarranted, according to Mach, because we are absolutely and forever confined to the sphere of our ideas, so also the laws of nature are consequently purely subjective modes of ours and for our purposes of looking upon nature. We have seen that this conception is erroneous. But not only the representatives of philosophy proper, but also all the more discerning among natural scientists, acknowledge that this first result is warranted. And those natural scientists who do not acknowledge it (Haeckel may again be cited as the most important present-day representative of this class), are involved, as a consequence, in the most astounding self-contradictions and the most extravagant theories. For in order to explain how this ordered cosmos originated from the random play of eternal atoms Haeckel is finally compelled to

endow these atoms themselves with feeling and volitional impulses. But this is a view which is, in the first place, entirely uncritical, since we simply have no knowledge of animate atoms, the concept atom being, on the contrary, only an aid for our conception, interpretation and calculation of the course of nature. On the other hand, if consistently thought out this view would lead to Leibnitz's theory of monads, and hence to some form of pantheism or theism.

But is this exclusion of rigorous atheism all that can be attained by using the cosmological argument? It is the only definite and unequivocal result which follows. However, speculations of probability lead beyond this. That we must conceive this consistent prime cause of the universe rather as of the nature of a mathematical logical intelligence may undoubtedly be considered the most obvious position to take, after what we have said. We may, therefore, brand as ill-founded conceptions like that of Hartmann-Drews of the unconscious absolute, or like that of Herbert Spencer of one universal immanent living energy, which, as he says, may not be determined more definitely, either materially or spiritually. Indeed this is even true, although in less measure, of Wundt's conception of an absolute basis of the universe regarded as an absolute world-will, of which it is impossible to form a specific idea even in the shape of an ideal.[31]

On the basis of the cosmological argument we

cannot go further than this. In order to gain a fuller appreciation of the philosophical conceptions last mentioned we must turn to teleological reasoning, and ask how far it will serve to supplement and to extend the cosmological reasoning.

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However, before going into this question, I shall, under the point of view of the above discussion, treat another and different problem—the problem of miracle. Although it is not really of great consequence for Christian faith itself, it is so for its history. At the same time the question just implied will have to find an answer, the question, namely, whether and in what respect Christian faith has an abiding interest in the problem of miracle.

To begin exactly with that formulation of this question which is common among the wider public, it may be precisely expressed as follows: Are miracles necessarily a component part of the Christian religion?

Now if an answer to this question is to be given from the standpoint of the Christian religion, the Christian to whom it is put finds himself in a somewhat awkward position. He can answer "yes" and "no" with equal justice, and this not, as it were, to qualify and to confuse the problem, but from the depth of his Christian religious convictions.

"No," for what have such external and extrinsic things as accounts of miracles and miraculous

events to do with the most concentrated inwardness of the spiritual and ethical personal life which the Christian religious conviction represents? Though "miracles" may be an indispensable factor in religions of a lower order, the religion of spirit and power stands superior to them, as is expressed indirectly, but yet very plainly, in the words of Jesus: "Except ye see signs and wonders, ye will not believe."

But still, on the other hand, "yes," miracles necessarily belong to religion, also and especially to the Christian religion. Indeed, taken in its entirety, the Christian religion itself is a miracle, whether considered from an objective-historical or a subjective-psychological point of view. And all the leading ideas in which it finds expression are designations of miracles—conversion, regeneration, redemption, atonement, peace with God, life in God! Above all, however, the basic fact of the religious life, which has attained full realization in Christianity and which the ideas just mentioned then aim to define more closely from different points of view, means, indeed, the miracle of miracles—the absolute miracle. For it means that, in spite of his finitude and although involved altogether in finite relations, man is given in his faith the power and the possibility of rising above the whole realm of temporal finite existence, and into that higher world transcending all mundane affairs—the world of God, of becoming, in a common life, one with God himself!

Thus we have two entirely different and even contradictory answers! But from our discussion it must already be clear that the contradiction in these answers is due to the fact that the word miracle by no means represents a simple, but on the contrary, a very complex concept. Hence the first and fundamental point is what we mean by miracle. Two questions are, therefore, of decisive importance: *In what sense* are miracles an integral part of the Christian religion? What does *the belief in miracles* mean for the Christian religion?

Let us begin with the latter. According to the view prevailing at the present time, miracles are such events as lie outside of the usual course of things, that is to say, outside of the course of events under the sway of the laws of nature, and they, therefore, involve a setting aside of these laws. For we of today look upon the "usual course of things" as subject to the laws of nature.

Now, to begin with, if we compare with this the attitude of faith, that of the Bible in particular, we find two important differences. In the first place, the conception of an order according to the laws of nature, at any rate in the exact modern sense of the word, is not found in the Bible. Hence, for it "the course of events as ordinarily known" is not at once and necessarily a course subject to laws of nature in our sense. In fact, this has quite frequently and properly been pointed out.

But the second difference is of still greater consequence. The scriptural belief in miracles does

not even greatly emphasize this lying outside of the known order of things. Emphasis is rather laid upon attributing the so-called miracles to God, because the hand of God is seen in them. They are, therefore, looked upon as acts of the universal sovereignty of God.

Consequently, it is the *belief in providence* which finds expression in the *idea of miracle.* It is from this point of view that the miracle stories of the Bible must primarily be considered, if their religious essence is to find due appreciation. In short, *belief in providence is the psychological motive of belief in miracles.* The details of the outward form in which miracles are clothed are immaterial and they are, of course, in accordance with the state of learning and knowledge of that time.

When we consider the Christian religion as a whole, that is to say, in its historical development, what has just been said about the psychological motive of the idea of miracle becomes still clearer. Especially do the legends of saints of the Roman Catholic Church offer a great store of material to support the thesis that the real religious basis of "miracles" is the belief in providence. These miracle stories are, so to speak, *the symbolization and the materialization of the belief in providence.* It goes without saying that this belief itself may be endangered by such a materialization. Even down to our own day history furnishes us many examples of this. We need only think of Lourdes, above all, but also of many an excess in the religious life

exhibited in our own (Lutheran) church, especially when there is a pietistic tendency.

This does not alter the fact, however, that the element of religious value in the idea of miracle is to be found in the belief in providence.

The real problem for the modern man, therefore, is: (1) Does the Christian belief in providence, if it is to be effectual, require an occasional setting aside of the laws of nature? (2) Is this belief in providence at all compatible with our present state of scientific knowledge, in particular, with our knowledge of the laws of nature?

At the very outset, then, we put these questions solely with reference to the *Christian* belief in providence. For while many analogies, rudiments and preliminaries of the belief in providence are to be found in other religions, this belief receives in Christianity a form entirely and quite peculiar to this religion. Here this belief comes into play to a far greater extent and goes much deeper than in any other religion or world-view.

For the Christian belief in providence is the conviction that everything that exists and all that happens has its origin in God, and hence, that nothing whatever, be it what it may, has ever happened or will ever happen apart from the will of God. Applying this to the individual, the further conviction follows that whatever may come to his lot is in accordance with the will of God and therefore redounds to his good, at any rate, that it may and is intended to serve this purpose, inas-

much as it is designed to be the means of his attaining eternal life.

This conviction is directly implied in and is inseparable from the Christian belief in God. Indeed, to be precise, it is not something put into the Christian belief in God, but *it is itself* this belief in God, exhibited from a definite angle and under a definite point of view. The belief in providence constitutes, as it were, the world-view of the Christian religion.

The justification of this belief in providence in any particular case cannot, therefore, be established on purely objective grounds. If it could be so established, it would cease to be religious faith. Personal voluntary acceptance of this belief is rather the indispensable prerequisite of its meeting the test in a concrete case. This is a matter of course, inherent in the subject. For if the belief in providence is convinced that whatever falls to the lot of an individual is ordained for him by God as a means for his attaining eternal life, then whatever falls to his lot can only come into full play as a real means for attaining eternal life, when it is made possible for it to come into play to this end, that is to say, when it is made part of the belief in God's providential dispensation. In any other case there is no inner disposition to permit these things that fall to the lot of the individual to become what, according to the conviction of the belief in providence, they *must* become.

Thus, by making belief in providence its world-

view the Christian religion consciously attaches the highest importance to the personal voluntary decision, the decision, moreover, of every individual believer. Hence, although it makes absolutely all things dependent upon God, this belief in providence is in no respect fatalistic. On the contrary, it always includes the personal decision of the will, not merely admitting but demanding it and including it with other fundamental assumptions. According to Christian faith the personal voluntary decision of man is a part of that reality which, as an entirety, is dependent upon God, and it is equally a part of the divine purpose and régime of the universe.

Indeed, it is for this very reason that the justification of belief in providence cannot be established, in any particular case, in a strictly objective and purely theoretical way. It can only be confirmed from practical life. Quite generally speaking, however, similar conditions hold for every world-view. A world-view is never a matter of mere theoretical reasoning and mere intellectual reflection. It is at the same time always a matter of the practical conduct of life and of the position taken in and toward the world in practical life. If this was frequently overlooked in the age of intellectualistic and speculative philosophy, hardly any of the philosophers of an idealistic bent seriously question it today. Indeed many of them, especially James, Wundt, Paulsen, Eucken, Dilthey, Rickert and Windelband, unconditionally

admit it. The belief in providence, as the world-view of the Christian religion, thus consciously emphasizes in this respect a phase which, whether it be explicitly recognized or not, belongs after all to the psychological character of every world-view.

From this brief sketch of the nature of the Christian belief in providence the answer to the two questions stated above is almost obvious.

Does a complete development of the Christian belief in providence require an occasional setting aside of the laws of nature? Absolutely no. If this belief in providence carries with it the conviction that absolutely all that happens has its origin in God, and accordingly, if it sees in the ordered course of the universe, so far as we are able to know and to determine such a course, an image of the universal sovereignty of God, then this belief in and of itself has no concern whatever to desire that it be possible occasionally to set aside this ordered course of nature. Quite to the contrary, since such a setting aside of this ordered course of nature would encourage the view that God intervened in the universal course of nature only by extraordinary acts and only occasionally. Thus the relation of God to the world would be conceived as far less essential and real than the Christian belief in God holds it to be. Indeed, for this belief the relation of God to the world is absolutely real and constant, and without any exception: "Without the will of God no sparrow falleth to the

earth and no hair from our head. He maketh his sun to rise on the evil and on the good, and sendeth rain on the just and the unjust."

The idea of a world ordered by the laws of nature would only be in contradiction with the Christian belief in providence, and hence with the Christian belief in God, if the course of nature were thought of as interposed, with absolute conformity to its own laws, between God and the happening of particular events, if, in other words, it were interposed in such a way between God and the happening of particular events, that it would be looked upon as entirely independent of God. And this would mean that it would be a positive absolute. But then the laws of nature which constitute the course of nature would have to claim an independent validity on their own merits, and, as we saw above, this is something which they cannot justly claim.

From a psychological point of view, just here lies the real motive and the kernel of truth in the exception which faith often takes to an order of things under the laws of nature. *By reason of its religious consciousness it protests, with this objection, against the sway of such an order of things according to laws of nature as being of itself and in itself an absolute and ultimate reality.* Therefore, by maintaining certain exceptions in particular cases, it is inclined to establish, to its own satisfaction, the justice of this protest, and the injustice of the opposite view, whether that view be consciously

formed or merely unconsciously favored. Hence miracle is the favorite child of faith.

Turning, now, to the second question: Is the Christian belief in providence at all compatible with our present-day scientific knowledge, with that of the laws of nature in particular? Again the answer is implicit in what has been said. The Christian belief in providence and the scientific or causal conception of the universe are not mutually exclusive, no, not even when both are followed out with all possible rigor and completeness. In fact, they are entirely diverse points of view, and instead of being mutually exclusive they are rather mutually supplementary.

The causal idea always possesses a twofold aspect, and hence can always be considered and developed in two ways. In the first place, in every more or less closed system of phenomena, we may investigate the dependence of every definite complex of phenomena of a particular kind on the remaining complexes in the same system. But we may also investigate the dependence of every particular event on the controlling powers of nature assumed to be constant. So long as one has in mind only partial systems of the phenomenal world both conceptions are still within the realm of scientific reflection. But if one turns his attention to the phenomenal world as a whole, that is, to the complete system of finite existence and of finite events, only the first conception remains open to scientific consideration, namely: that which seeks

to understand the dependence of all the various single phenomena upon one another. To be sure, even here scientific reflection must admit the possibility of the second causal conception, which now seeks the absolutely final cause of every single event. But the latter no longer belongs to the domain of scientific reflection, since it leads beyond the sphere of the phenomenal world.

It is precisely with this last consideration and attitude, and only with it, that faith has to do. It makes the whole phenomenal world and everything that occurs in it dependent upon God as the highest and absolute reality. But under this point of view everything that is and occurs in the world can be interpreted as a "miracle." For the world itself as a whole, the fact that it is at all, and that it is as it is, is entirely beyond the comprehension of man, and hence, taken from a purely objective point of view, it is a miracle, indeed, an absolute miracle. The subjective reference to the relation of the individual to God comes into play as a further element for the religious attitude toward the matter, and consequently faith designates as "miracle" only what in particular instances seems to it to point with special clearness beyond the world of phenomena and directly to God. What in a given case constitutes this depends solely on subjective personal conditions and preconceptions. Objectively considered, however, the position must be maintained that in the last analysis everything may become "miracle" for the individual—

the least as well as the greatest, the commonplace no less than the unusual—and that it shall at the proper time become miracle. For the whole world is God's, and even the least and most insignificant thing can give a glimpse of the world beyond.

But when it has once grasped the meaning and import of this inquiry faith, especially belief in providence, has no interest whatever in really extraordinary phenomena in the sense that they set aside the laws of nature. Faith can leave it entirely to purely academic discussion to deal with this matter. Such discussion will lead to an epistemological delimitation of the concept of the "laws of nature," such as we have already set forth above.

Finally, to bring this discussion of the concept of and the belief in miracle to a close, one thing more must be added. It makes a difference, and indeed a momentous and significant difference, whether we have in mind the sphere of the material course of nature or that of the inner psychic life and its relations to the organism. So far as we can see, the causal law holds sway in the former in the form of a strict equivalence of cause and effect, that is to say, according to the formula, *causa æquat effectum*—cause and effect are quantitatively equal and can be quantitatively balanced against one another.

But the law of causality must not in this form be extended to the domain of the inner life, least

of all to that of the higher mental life. Quantitative considerations play an altogether unessential rôle in the inner life. Here, on the contrary, the qualitative content is the crucial thing. Hence it is impossible to set up for this inner life, and its relations to the organism, anything at all like such fixed rules as for the material course of nature. At any rate this is entirely beyond our power at present. As far as we are able to apprehend anything about the laws of the psychic life, these run in an exactly opposite direction to those of physical and material causality. What might here come into question is not a law of quantitative equality, but far more a law of "spiritual growth"—a law of an increased growth of the products of the mind. I thus adopt the terminology advocated by Wundt because, as the senior in exact psychophysiological investigation, he is entitled to special consideration in this matter, but futhermore, because his formulation shows very plainly what care must here be exercised in using the concept "law."

As to the matter itself, there can certainly no longer be any serious difference of opinion with respect to the crucial point. The soul is not a mere causal mechanism. This is admitted today by practically all philosophers. And not only philosophers admit it, but also natural scientists in increasing numbers are admitting it, and among them, above all, the representatives of that science which is here primarily concerned, namely: psy-

chiatry. They realize that it is to the interest of psychiatry to recognize that lawfulness peculiar to the psychical as psychical. Thus, for example, W. Hellpach, who has already on other occasions proven that he is an investigator of psychological training, writes: "Psycho-pathology has to deal with phenomena of consciousness, and that means with contents of consciousness. The abnormality must be manifested in these, if we wish to speak of psychic abnormality at all. But we know practically nothing about the relation of the contents of consciousness to the processes of the brain. The effect of this lack of knowledge has become very evident in psychology. Scarcely a psychologist ever even thinks now of classifying psychic contents according to their corresponding physical processes, much less of attempting to investigate these contents and processes with reference to any causal connections. Is it a matter of only slight importance for the psycho-pathologist to understand the qualitative and hence absolutely distinctive nature of the psychic? Hardly, for he too must familiarize himself with the idea that the content alone of a psychic phenomenon is decisive in determining whether it is abnormal or not. For plain everyday experience proves this necessity." *

The psychic life, then, is the true sphere of religious "miracle." But here, too, it is unnecessary

* Grundgedanken zur Wissenschaftslehre der Psychopathologie, Leipzig, 1906, pp. 82 f. See also his Die Grenzwissenschaften der Psychologie, 1902.

to think of a "setting aside" of the laws of nature, however little the religious disposition itself—its development and unfolding—rests upon such a "setting aside."

And now let us turn to the teleological argument.

Chapter Four

Biology and the Christian Belief in God

IS there any such thing as teleology, or, at any rate, a teleology that is scientifically tenable and convincing? Is it really possible to establish other than causal relations in nature? He who holds that it is will consider, exclusively or at least primarily, as the field in which such other relations can be established, the field of organic nature, that of living things, that is to say, the field of biology.

A. Teleology in Organic Nature

The point at issue, however, is just whether this field occupies a unique position in this respect. From the writings of Haeckel, if from no other sources, it is well known that wide circles of modern natural scientists, and especially such as display a general philosophical interest, take a decidedly negative attitude in the matter. Repeatedly and with untiring zeal Haeckel impresses upon his readers that all phenomena and facts even of the organic world are without exception explicable and intelligible under a purely mechanical causal view. Mechanical causes alone, he urges, determine those peculiar motor phenomena by which organisms

are distinguished from inorganic things, and which we call life in the narrower sense. Not only in his "Riddle of the Universe" but also in his most important scientific writings, Haeckel has maintained this point of view, and quite recently he has again given it special emphasis in his "Wonders of Life." But he by no means stands alone in holding this view. On the contrary it is the attitude of a large number of modern natural scientists. In Roux and his numerous disciples this conception has found protagonists of greater scientific rigor than Haeckel. In the mechanics of evolution, as he calls it, Roux sees the real science of the future. He defines it more closely as the causal science of organisms, and he explains this to mean that it is, or must certainly become, the science of the *real formative causes*, the *veræ causæ*, to which the organic kingdom as a whole, as well as every individual representative, owes its origin.

In its beginnings this view and mode of thought goes back to the middle of the last century, to the time of the violent opposition against the theory of *vitalism*. Natural philosophy, as well as philosophy in general, used to explain the distinctive and peculiar character of organic life by the hypothesis of a special vital power, effective only in organisms and constituting their special divine endowment. The real characteristic of living creatures, as distinguished from inorganic nature, was seen in this purposive active vital power, which was looked upon as different from all physical and chemical

forces. Now there can be no doubt that this concept and this theory of vital power have often been misapplied in order to obscure certain problems or to dismiss them without much ado. It was customary to stop the discussion of all questions and perplexities to which biological investigation led, by referring to the vital power of divine origin as a sufficient explanation of the phenomenon under consideration. Hence it cannot be denied that the opposition to vitalism was justified. In fact, this theory is an impediment to scientific investigation and that is a sufficient reason for giving it up altogether, since its sole object is to explain certain scientific problems. The well-known philosopher, Lotze,[32] was chiefly instrumental in opposing and overcoming it. But, and here we come to the heart of the matter, the way in which vitalism has often been and is being combated in recent natural science and natural philosophy, quite contrary to Lotze's intentions, amounts at the same time to a definite and positive conception of the nature of the phenomena of life and of their relation to inorganic nature. Implied in the theory of vitalism was the idea that living phenomena cannot be fully explained and understood under a causal mechanical view. But those representatives of modern natural science who oppose vitalism, in fact, take the position that they can be so explained. In the whole domain of nature they recognize only causal relations, and hence they maintain that causality reigns supreme in this domain. Now we have

already made it clear that absolute validity can not be claimed for causality. The law of causality does not govern the course of nature with absolute necessity by virtue of its own comprehensive force, but on the contrary it merely represents that order which we meet with everywhere in nature as we know it—as it comes to our understanding. On this account it must be conceded that the law of causality holds generally. But does it follow from this general validity that we are justified in proclaiming causality alone to hold, and hence in denying and contesting all other relations than the mechanical and causal in the whole domain of nature, including the phenomena of life? On purely logical grounds, by no means. Taken in the abstract, a system of facts constituting a mechanical causal complex may at the same time be a part of a purposive complex, or it may even constitute the whole of such a complex. Indeed, we see this in all machines and parts of machines, for although they serve the definite purpose for which they are constructed by human ingenuity, their operation is, as a matter of fact, mechanical and causal. Hence the only question arising is this: What conclusion does the existing state of facts demand or at least favor? And, precisely by reason of recent biological research and discovery, it seems to me that to this question we may give the answer: The assertion of the exclusive validity of causality is not only unjustifiable but directly untenable.

To prove that this answer is correct, at least for some of the most important cases in question, I shall again take up the illustration of the machine. The comparison of the living organism to a machine comes to our mind almost as a matter of course, and it has, in fact, frequently been made. But since De la Mettrie coined the well-known phrase "*l'homme machine*," it has often been used in support of precisely this purely mechanical causal view, which is satisfied with chemical and physical processes as a complete explanation of the nature of living organisms. But the more discerning of the natural philosophers of today admit that such a comparison is really adverse, indeed fatal, to this view. Reinke especially has strongly emphasized this fact, and in so doing he is in full accord with philosophers proper, such as Liebmann, Paulsen and Wundt. But even natural scientists, not at all or only slightly interested in philosophy, have recently expressed themselves to the same effect. I refer the reader especially to Oskar Hertwig, anatomist and biologist of Berlin, particularly to his "Zeit- und Streitfragen der Biologie." [33]

For although I may be thoroughly familiar with the various chemical and physical processes involved in the operation of a machine, this is not sufficient to give me any knowledge of its real nature. For this it is necessary that the engineer explain to me the plan of construction and the definite appropriate arrangement of its various

parts. It is just this peculiar arrangement, due to human intelligence, which is primarily characteristic for the machine. It is made, indeed, of the same materials which are ordinarily found in nature, and it works with the same forces, and according to the same laws, that we are accustomed to see in nature. But in spite of this fact, the machine differs fundamentally from all other manifestations of nature, and leads to results which do not occur anywhere else in nature. This is due to the fact that human beings, acting with rational and systematic understanding and design, have given the machine a definite form which makes possible its new and specific achievements.

Now it is very similar with living organisms. Chemical processes and physical properties alone do not explain their peculiar and unique functions. On the contrary, it is necessary to presuppose an organization of elements peculiar to living organisms—a machine-like arrangement or structure, which is prerequisite to the phenomena of life, just as the design evolved by rational thinking is prerequisite to the machine.

Let us now briefly call to mind the most important of these specific functions of organisms. It will then also become clear to what extent the machine analogy characterizes their nature. However, this will only be by way of suggestion, and is not intended to be exhaustive.

Nutrition, *regeneration* and *propagation* are the

three concepts which express the most essential specific traits of the organic world.

Haeckel, among others, looks upon nutrition as a purely chemico-physical process like the formation of crystals, for instance. Just as in the formation of crystals new particles are, according to definite laws, continually deposited by accretion on the already solid nucleus, so in nutrition, it is claimed, similar conditions hold. But this analogy is misleading, indeed it is absolutely false. For in the nutritive process of organisms we have to do not merely with a process of accretion, but with internal and organic assimilation. And what is more important, this consumption and assimilation of food always takes place, from the lowest stages of life up, according to a real selective choice. Even those most primitive forms of life consisting of simple cells or not even having the full value of a complete cell, have the capacity of selecting nourishment suitable for themselves and of sucking it in for the purposes of assimilation. And what is true of these primitive forms of life is true also of those cell structures in the digestive organs of higher forms of life whose function is the assimilation of food. We know today that the reabsorption of the walls of the intestines is due to the fact that special cells here exercise the specific function of absorbing suitable matter, and of passing it on for further assimilation in the body.

Moreover, as regards the popular reference to the formation of crystals, the fact must not be

overlooked that this already presents a difficult problem in itself. Driesch has advocated the legitimate and important distinction between "static" and "dynamic" teleology. Thus the formation of crystals falls within the domain of static teleology and is, therefore, itself already teleological in character.[34]

How great the natural capacity of regeneration is in plants, animals and human beings is, at least in general, familiar to all. I shall illustrate this by an example which will at the same time clear up still another problem of importance for our whole investigation. The question is as to whether relations and phenomena of a teleological nature, that is to say, in any way purposive in character, can be proved to hold in the realm of organic life. However, for the present I avoid intentionally, for a reason that will appear later, the expression "purposive." It is obvious that the capacity of regeneration can be profitably used as a positive element of proof by the advocate of teleology. Consequently the opponents of teleology have made a systematic attempt to invalidate every line of argument of this kind by referring to so-called non-purposive or dysteleological facts and processes, contrasting them with such teleological phenomena. Again Haeckel, more than anyone else, has taken pains to collect all such dysteleological facts that he could find, in order to found upon them a special *doctrine of dystelology*.*

* Natürliche Schöpfungsgeschichte, 10th ed., 1902, p. 288.

It has often been observed that in craw-fish, when an eye is destroyed, an antenna or feeler similar to those of insects is produced instead of another eye. Now in this production of a less perfect to take the place of a more perfect sense organ a non-purposiveness has been seen. Is it purposive, it has been asked, for this entirely different and less perfect sense-organ to be innervated by the optic nerve? And it has been answered: "Here the teleological point of view breaks down, for we are confronted with an aberration in the teleological sense." [35] This case, which has been much discussed in print as well as in meetings of natural scientists, shows with all the clearness that could be desired the logical absurdity of this, and all similar objections raised against organic teleology. The teleological character of regeneration is not disproved by the fact that the latter has its limitations. It would be entirely in line with this line of argument, if one were to seek to establish the absolute dysteleology, non-purposiveness and miscarriage of organic nature as a whole, by pointing out that, with very few exceptions, living creatures do not grow a new head after it has once been severed. Logically such manifest nonsense differs only in degree from Haeckel's assertion that in very many cases the purposiveness of organization is only apparent, and that more exact anatomical and physiological investigation often shows that "even very highly developed organs of seemingly well designed construction exhibit great me-

chanical defects." [36] The general point of view under which all such objections must be considered is obviously this: we may not definitely decide the question of teleological relations and phenomena according to our desires and the state of our knowledge, we may not demand a subjective anthropopathic teleology, but we must acknowledge the objective empirical teleology. This makes it incumbent upon us to go still deeper into the whole problem and we shall now attempt so to do.

The so-called teleological proof for the existence of God consists in concluding the existence of a designing creator from the purposive order of nature. But a peculiar difficulty presents itself against such an attempt. The concept of purpose is rooted in inner experience. Whatever arises from a decision for a purpose is purposeful and purposive. Consequently, in order to be quite sure that any result is purposive, we must know that it arises from a decision for a purpose, from an act of will of an intelligent being. From purposiveness we seek to draw the conclusion that there is an intelligent will, and yet we can only recognize a result as purposive on the supposition of an intelligent act of will. In the last analysis we cannot avoid this circle. However, we cannot for this reason simply drop the question, or we should for similar reasons actually have to abandon scientific investigation altogether.

On the contrary, we shall have to find the best criterion we can to characterize results as pur-

posive, disregarding the fact that we know their origin to lie in the will of consciously purposive intelligences. If we want to treat the matter systematically, we shall take up the highest products of the purposive activity of human intelligence, and inquire what is characteristic of them. These highest purposive human products are such systems as are complete within themselves, and whose component parts serve the purpose of realizing a consistent end. Here we have a criterion which is far-reaching in enabling us to investigate and to judge objectively. To be sure, the objectivity of judgment does not extend directly to the characteristic of purposiveness, but only to that of being directed toward an end. For the present the possibility must be left open that these ends may be random and accidental. Von Baer deserves the chief credit for having introduced the concept of directedness toward an end into natural science and natural philosophy, and for having insisted that phenomena of this kind must be recognized as real.[37] However, he makes a clear distinction between purpose and end. Now, since this distinction seems to me to be both real and important, I consider the polemic which Reinke has recently started on this point against Baer to be a step backward.*

The truth of the matter really is that directedness of nature toward an end can be made an object of purely empirical scientific investigation while this cannot be done with the purposiveness of nature.

* See Anm. 38, Reinke's *Dominanten*.

It is a further question, lying beyond the domain of the exact sciences and capable of being dealt with only by philosophical reflection, whether the facts falling under the head of directedness toward an end must be interpreted as purposive results. Since the Greek terms teleology and teleological have the more general meaning, comprising both the concept of directedness toward an end and that of purposiveness, we can properly speak of an empirical teleology, as has recently been done. The question formulated above may then be restated: Does an empirical teleology lead necessarily to a metaphysical teleology?

Of course the answer to this question must depend upon the scope and nature of empirical teleology. This brings us back to our discussion above.

B. Propagation and Evolution as the Culmination of Organic Teleology

It still remains for us to consider propagation as the third specific characteristic of living organisms. For it is in this that their teleological character finds its strongest expression.

Natural philosophy as well as philosophy in general formerly sought to explain the great enigma presenting itself in the fact of reproduction, by the so-called theory of preformation. This theory assumed that the germ or beginning of every living creature already, only on an infinitely reduced

scale, represents the developed individual in question. The germ must be looked upon, it was claimed, as an extremely small image of the completely developed individual, the imperfections of our sense-organs alone preventing our recognizing this miniature image as an exact copy. The whole ontogenetic course of development, even in the early embryonic stages, was accordingly taken to be a simple process of growth by nutrition. In order to preserve the real continuity of the development, which is the real enigma, it was further held that all the germs of any particular species were from the very beginning contained in the first germ of that species. Accordingly, it was calculated that Eve, for example, was created with an endowment of two hundred billion germs of human beings. This theory of preformation is today untenable, not primarily, as most people will think to begin with, on account of the absurd numbers involved, for no limit can be set, after all, either as a maximum or as a minimum. But it is untenable because we know today that the germ of every living creature is originally a single cell * like all those of which the completely formed creature consists, and consequently, that cell segmentation and cell divi-

* More exactly, the ovum as well as the sperm cell, on whose union propagation depends (in so far as this does not take place by simple division or parthenogenesis) have in form and function the value of elementary organisms. In particular, the cell nuclei are, as recent investigations have made at least highly probable, the real vehicles of reproduction, just as in the union of ovum and sperm a union of their nuclei is primarily involved.

sion represent the first stages of embryonic development. Hence the germ, the simple cell cannot be an image of the complete creature and cannot be organized like the latter.

The problem confronting us in reproduction is then really this: How does it happen that organisms are developed from simple cells that are always like, in kind and constitution, those from which these cells have been detached? Since all germs of all living creatures are uniformly simple cells, how can such a cell invariably develop in such a way as to conform to the species in question? Never does a blade of grass or an apple tree grow from the germ of a lemon seed, never does a turtle or an elephant develop from the egg of an ant, never does a sea-eagle or a humming-bird arise from the blastocyst of a pigeon egg!

Nevertheless, people have tried to comprehend this fact, whose wonder only seems to increase the more it is reflected upon, by purely causal mechanical considerations, and with a rigid exclusion of all teleological reflection. The so-called idioplasm theory of the late botanist, Nägeli of Munich, and the germ-plasm theory of the biologist, Weismann, are especially deserving of mention among the theories advanced to serve this purpose. As is recognized by natural scientists and philosophers, they are by far the most important of these attempts. These theories are of interest and importance for us by reason of the fact that they bring out the full significance of the problem before us. In fact, both

theories do this in essentially the same way. Their differences appear only in their finer details. For our purpose it is sufficient to discuss the fundamental idea common to both theories.

Since all organisms, despite their extreme diversity, are developed from simple cells of microscopic size, it follows that these germ cells themselves—this is the fundamental idea common to both theories—cannot really be the ultimate and the most elemental units of life, but must themselves be *highly complex in structure or highly composite in their organization.* Every germ cell must be a veritable microcosm. For only thus is the infinite variety of development possible. Nägeli calls the hypothetical component elements of the cell micells,* and, as a result of certain calculations, he finds that a mass of protoplasm equal to one-thousandth of a cubic millimeter contains about four millions of them.

Now, to be sure, this calculation is really of consequence only from the view-point of epistemology or from that of the infinitesimal calculus. These two fields here have a common interest.

The same reflection must of course be repeated for the individual mi-cells. It follows, then, as I have already stated, that every cell is really a microcosm, a true universe. While, on the other hand, if we start a little farther on in the series constituting the system of infinitesimal equations which we can and must look upon as constituting

* From the Latin word *mica*, meaning a small grain.

the world, then even the solar system to which our earth belongs and which, in spite of Galileo, Newton and Laplace, indeed, in spite of the undulatory theory and spectrum analysis, we still like so much to regard as the universe pure and simple, then, I say, even this solar system appears as a mere grain of dust in the universe.

On the other hand, every individual cell is after all a real universe! And hence the result of our whole discussion of reproduction is exactly this: we must regard the very component elements of livings things—the individual cells—as entities of a most highly complicated organization. Even these individual cells have a machine-like structure, but, as we know by experience, the end which this machine-like structure serves, and to which it leads, lies infinitely beyond all achievements which human intelligence and energy can attain. For it serves the end of securing the continuity of life. A superb teleology, a most comprehensive directedness toward an end, is discernible in organic nature, even when we consider individual living creatures as such. If philosophers like Spencer, Hartmann and Wundt interpret these teleological facts, which they accept, in the sense of a pantheism, however it may be defined in detail, we shall still have to grant them the possibility of such an interpretation. But it is certainly not the only possible interpretation, nor indeed the one most naturally suggesting itself, nor the one best founded. By every analogy of experience the in-

terpretation meeting these requirements is undoubtedly that which the Christian religion contains in its belief in a personal God.

After all perhaps it is not a mere accident that a natural scientist like Reinke,[38] having once come to accept the justice and demonstrability of the teleological view of the organic word, is ready even before professional philosophers (to whom the details of the teleological order are not as clear and familiar as to himself) to declare faith in a personal creator to be the only key with which we can, at least, attempt to solve the riddle presented by those facts. He writes: "Reasoning by the methods of induction and analogy, the natural scientist will find that reducing the nature and the existence of organisms to a creating deity is not only the most plausible but the only conceivable explanation—for him this follows with convincing logic from the facts." * This statement we must certainly limit and set right from an epistemological point of view, but with such limitation it seems to me to be entirely warranted. And within this limitation, Reinke's argument directed especially against pantheism is relevant, namely: "The machine-like structure of plants and animals is incompatible with pantheism, for the inventor and master workman are inseparably bound up with the concept machine" (p. 464).

With all this, however, we have thus far merely crossed the threshold of the teleological order of

* Die Welt als Tat, 1899, p. 457.

nature. In terms of the illustration already several times used, we have considered the various parts of the machine and grasped their teleological character. Let us now turn our attention to the whole range of living organisms, as it constitutes a gradually ascending line of ever higher and higher forms of life. For the world of living things constitutes a connected whole, and when we consider it above all, as it seems to me we must, from the point of view of evolution, it represents a great work of art, which is self-perfecting in the sense that the lower forms of life lead to higher and higher forms.

Hence I am certainly of the opinion that the doctrine of evolution and the Christian belief in God not only do not conflict but, on the contrary, that they are mutually complementary—I might almost say that each is necessary to the other. The Christian belief in God alone comprehends the riddle propounded by the theory of evolution—it does not solve but it comprehends this riddle.[39] For it is most especially under the conception of evolution that the world of living things seems like a work of art, in comparison with which even the most elaborate human works of art are but very imperfect imitations. It appears as a work of art in which innumerable distinct elements serve the single purpose of developing ever more perfect forms of life, from the lowest stages of unicellular organisms or such, indeed, that do not even have the value of a complete cell in form, and with only

an extremely vague sensibility, up to the highest stage where rational and religious moral life becomes possible, and with it conscious and responsible personal beings. Only in this sense and to this extent is the theory of evolution in the domain of organic life a well-founded hypothesis. Even then it is no more than an hypothesis. Compared with the unscientific exaggerations which we find in this respect in Haeckel's publications, and all the more in those of the popular authors of his school, it is at all events of value that strictly professional natural scientists have recently emphasized most vigorously the hypothetical character of the whole theory of the origin of the species, of the theory of evolution in the domain of organic life, and have reverted to a complete repudiation of it.* But considered from a higher philosophical point of view this must be adjudged a hasty narrowness.

For in the sense explained the doctrine of evolution is really a well-founded hypothesis, one of the best founded hypotheses, in fact, of all science, and there are certainly much stronger arguments in favor of it than there are in favor of the opposing hypothesis of the independent creation of all the various genera or species of organic life. For it must be conceded by everyone who is not willing

* The chief representative of this line of thought is the zoologist Alb. Fleischmann of Erlangen. Concerning him and his lectures "Uber den Auf- und Niedergang einer wissenschaftlichen Hypothese," see Anm. 9.

to defend to the utmost the verbal inspiration theory of the Scriptures of the seventeenth century that the theory of independent creation is, from our point of view, nothing more than an hypothesis.

Proof that the doctrine of evolution or the theory of descent is one of the best established hypotheses of science is derived especially from three branches of knowledge: *comparative biology* or comparative botany and zoölogy, *paleontology* or the science of organisms living in earlier periods of the earth's development, and *ontogeny* or the inquiry into the life-history of individual organisms.

Comparative biology teaches that the demarcations of the various species of living organisms are frequently not fixed but uncertain and fluctuating. Natural science, as well as philosophy, had formerly considered the distinctive differences of the various species to be absolutely fixed and immutable. But this position has become untenable with the broadening of our knowledge of the plant and animal world. Varieties and subspecies often represent connecting intermediary forms, and hence a systematic demarcation and classification becomes a mere makeshift, useful only for practical purposes. Similar conditions obtain for genera and higher groups. However, we must keep in mind that there are, in the vegetable as well as in the animal kingdom, a certain number of distinctively organized groups or types which are not, at least immediately, reducible to one another. On the contrary, as compared with

the older view, recent investigation has proved the necessity of increasing the number of such distinct groups.[40]

Paleontology has established three facts which tend to support the theory of evolution. It has shown, first, that in the different periods of the history of the earth correspondingly different forms of life have been developed, and that these forms did not remain the same throughout all these periods. Secondly, it points out that the successive forms of life found in the various strata of the earth and representing the different periods of its history, constitute a progressive line of development, inasmuch as the simpler forms predominate in earlier while higher forms always occur in the later periods. Finally, paleontology teaches that among extinct species there are some which may, with a certain degree of justice, be regarded as intermediary and transitional forms.[41]

So far, however, the efforts to establish a continuous progressive line of development have met with so little success as to make it highly improbable that any material advance will ever be made in this direction. It should be specifically mentioned that no form has yet been discovered which might with certainty be regarded as an intermediary form which really fills the gap between the highest orders of quadrupeds living today and man.[42]

Ontogeny teaches that every higher organism must, in the process of its development, pass

through forms which characterize lower organisms. A particularly striking example is the branchial stage in the development of the embryo of higher vertebrates. On the basis of this fact Haeckel has formulated what he calls the fundamental biogenetic law, namely, that the process of development of the individual is a rapid and contracted recapitulation of the history of the species. In this form and broad generality, to be sure, the "fundamental biogenetic law" is open to very serious objection. But the careful formulation just given does express a real state of facts, such facts, indeed, as in themselves lead to the theory of evolution, or better, to a theory of evolution.[43]

Thus we have three groups of facts supporting the theory of evolution. By reason of the agreement and mutual corroborative character of these facts this theory becomes one of the best established hypotheses of all science. Of course the possibility must be left open that this development cannot, after all, be looked upon as taking place, without break and unalterably, in an absolutely continuous line. On account of the restrictions and provisos which we had to make with respect to each of these groups of facts, we are forced to recognize this possibility. Moreover, various empirical data tend directly to substantiate such a position. It is always a matter of method for us to take into account every supposition which is unfavorable to us as a representative of the Christian belief in God. Every modification and every point yielded

in the direction mentioned is a concession to our own position. It is just for this reason that we deem it sufficient to have established the fact that the necessity of such modifications does not by any means lie outside the realm of real scientific reflection about the doctrine of evolution. However, we shall not, at present, make any direct use of this restriction, but on the contrary we shall accept precisely the other possibility, namely, that there is really a continuous unbroken development from a first beginning up to an ultimate final stage. For as a possibility this must certainly be held valid.

Now would the fact of such a development jeopardize the Christian belief in God? I have already emphatically answered this question in the negative. But since we now know more about the facts supporting this theory, I can treat this question more fully. It certainly cannot be denied that, considered and interpreted from the point of view of evolution, we have before us in organic life a system of facts of empirical teleology. But, more than this it is a system of empirical teleological facts for the understanding of which a metaphysical teleology is absolutely required. For in the face of these facts the strictly mechanical and causal position is pure nonsense. Perhaps it might be conceivable that a watch, an organ or a microscope could, in the course of millions of years, and as the result of a fortuitous concurrence of circumstances and of the bringing together by chance

of the various component parts, be produced by a purely causal mechanical process, although I think this highly improbable. But that cells could originate spontaneously and accidentally, cells which are capable of segmenting and dividing, of developing into a morula and blastula, of expanding into endodermic, ectodermic and mesodermic tissues,[44] and thus finally of producing most complex organisms up to man himself, who subjects the very universe to his questions and investigations, or, to use once more the words of Dubois Reymond, cells capable of bringing about a development of a primordial bacillus into a palm grove, of a primitive micrococcus into Suleima's graceful mien and Newton's philosophical brain—to maintain that such cells could have originated accidentally by a purely causal mechanical process is madness, even though there be method in it. It would be much more plausible to hold that the facts adduced and which represent such a complicated work of art, point unmistakably to a master-builder who sets and realizes definite purposes and to whose conscious and purposive intention the origin and development of life owes its beginning.

C. Interpretation and Delimitation of the Concept of Evolution

A posteriori this conclusion is, of course, by no means imperative, since the pantheistic explanation remains open as a possibility. Nevertheless, this

interpretation of the Christian belief in God is undoubtedly reasonable, and, viewed from a purely scientific standpoint, it has the great advantage over the pantheistic interpretation that the analogy of experience is in its favor, and that it avoids the difficulties to which the latter inevitably leads. For the simple fact, which is all that is given us as a matter of experience, the fact of the realization of purposes by self-conscious and purposive intelligences, brings to naught every attempt to give this pantheistic interpretation a more intelligible form. When, in spite of this, the attempt is made, the result is altogether arbitrary and fantastic constructions. That Hartmann's "unconscious absolute" is such a construction is almost the unanimous opinion of all philosophers today. But even Wundt, who has frequently expressed this opinion most forcibly, nevertheless finally comes, in his own attempt to give this pantheistic interpretation a more intelligible form, to a conception closely related to that of Hartmann, and for this very reason it falls under his own criticism of unconscious mind as a self-contradictory concept. For, in spite of all the efforts of Hartmann and his followers, to maintain a speculative concept, set up *a priori*, by subsequent epistemological and psychological argument, Wundt is manifestly right when he emphasizes the fact that the concept of mind springs from our own inner experience, that it is, therefore, bound to our consciousness, that consequently everything pertaining to mind is conscious mental

activity, and that, as a result, "unconscious mind" is a self-contradictory concept.*

But is not the concept to which the problem under consideration reduces with Wundt, the concept, namely, of the "*spontaneous generation of the organic world*," similarly self-contradictory? And after all, would not such a "spontaneous generation of the organic world" presuppose "unconscious mental activity" as the ultimate and primary force of the universe?

Nor does the law of *heterogony of purposes*, adduced by Wundt to make this spontaneous generation intelligible, eliminate the difficulty mentioned. This law does, indeed, express a real fact, namely: that in the organic world definite acts, originally controlled by the will, bring about permanent changes which facilitate and perfect such acts, and thus gradually lead to a steady increase in effectiveness beyond the end first sought. However, this heterogony of purposes, and the corresponding gradual self-perfecting of the organic world, applies only to the way in which the ascending process of development takes place, but not to the sum total of the facts of organic development on their own merits. Because, as Wundt himself

* In his "System der Philosophie," 2d ed., p. 559, Wundt says explicitly: "The assumption, by reason of any objective indications, that there is a mental content, is justified only where the latter must be interpreted as acts of a consciousness similar to our own, however different its stage of development may be." Consistently maintained, this insight leads to a result beyond Wundt's own pantheism.

admits,* the creative energy which is at work in organic nature, never consists in an absolutely new creation, but always in an unending and continual differentiation and intensification of acts accomplished, which are given originally in their simplest form. When the matter is taken as a whole the argument based upon this "creative energy" is inadequate. What must be thought of the final result of Wundt's discussion follows from the preceding. He writes: "Even if the contemplation of organic nature makes it probable that the purposiveness displayed in the organization of living forms has sprung from a purposive will, there is no reason whatever for assuming that this purposive will lies outside the organisms themselves, since experience teaches us, in fact, to recognize the volitional acts of animals as important and fundamental factors in the adaptation of their organs." † This statement is not positively erroneous. But in this form, the assertion that there is no reason whatever for assuming the purposive will, which, even according to Wundt, must be posited, to lie outside of organisms themselves, must be challenged. Really it can only be said that for a purely theoretical and scientific consideration there is no reason absolutely compelling us to make this assumption. But it is the assumption easiest to understand and best founded.

Still less than that of Wundt can the view of Ostwald serve as a valid objection to our position.

* *Cf. op. cit.*, p. 332 f. † *Op. cit.*, p. 432 f.

In the world-view derived from energetics, which Ostwald promulgates, he seeks to establish the concept of energy not only as the fundamental concept of theoretical physics, but beyond this as the fundamental philosophical or metaphysical concept. Hence he undertakes to reduce both inorganic and organic processes to laws of energy, and therefore finally to explain the organic as the product of inorganic laws of nature. Indeed he claims that organic life with all its functions and manifestations is derivable from such laws of energy. In all of these, that is to say, we have to do at most with special kinds or forms of energy which may and actually do change into one another. Consciousness and mental activity, too, are, according to this view, only a special form of energy, or at least depend upon such a form. Now it is neither necessary nor possible for us to enter here into a criticism of the whole of this fundamental conception built up on "energetics." The uncertainty implied in the preceding and which Ostwald is unable to overcome constitutes the real weak point in the conception. All that is of interest to us here is the way in which Ostwald, in order to find further support for his position as an advocate of energetics, deals with the problem of teleology. His aim is nothing more nor less than pointing out a way in which "the problem of the purposiveness of organisms seemingly so extremely intricate" may be made, at least in principle, to lose its enigmatical character. To accomplish this end he

would let the concept of purposiveness apply only to the term of life of organisms. Whatever increases this term of life he calls purposive and whatever diminishes it he calls non-purposive. However, this term of life must not be understood to refer to the individual organism, but, in accordance with the law of heredity, to the species. And here he holds that Darwin's idea of the survival of the fittest furnishes a sufficient explanation. So this explanation is held to follow from recognition of the fact that those forms remain which happen to be most virile, and this just because the other less virile forms are swept away by the current of time. But this amounts to an arbitrary limitation and restriction of the problem, and to giving then a solution which is truly only too "trivial." * The teleological problem does not begin to reach its full depth when it is considered only with reference to duration in time. To get at its full depth we must expressly keep in mind the ascending line of development leading always to higher forms of life, and we must take into consideration also the highest form of life as exhibited in the religious and moral consciousness of man. But it is just at this point that Ostwald's conception, based as it is purely on "energetics," breaks down completely.

After this discussion of this newest form of nat-

* On page 434 of his "Vorlesungen über Naturphilosophie," Ostwald himself says: "We arrive at the absolutely trivial proposition: Of the forms of organisms, those last longest which are most lasting."

ural philosophy it still devolves upon us to define our position toward Darwinism. For this is necessary in order to complete the argument.

I have been using the concepts evolution and doctrine or theory of evolution in the broader sense, taking them to mean quite generally the philosophical attitude which takes account of a gradual development of organic nature. Only this can be upheld as a well-grounded hypothesis. Darwin's special theory of selection, even though it is still sometimes treated as identical with the doctrine of evolution in general, is not a well-grounded hypothesis. Basing its argument upon the doctrine of natural selection especially, this theory of Darwin has the definite aim of establishing the process of evolution as altogether natural and causal mechanical. But at least when it claims to make the process of evolution completely intelligible, that is to say, when it claims to be the sufficient and complete explanation of the progressive development of organization, this theory of selection cannot be accepted as a legitimate hypothesis. For as soon as we go into the logical consequences of the theory of selection as thus understood, we find ourselves everywhere confronted with logical absurdities and contradictions. Over and over again we are forced to conclude that natural selection must in some way have played a part in the process of evolution of organic nature, but at the same time, also, that it does not by any means furnish the sole and sufficient explanation

for the progressive development. It may be stated as a fact that today all professional philosophers without exception hold the view of Darwinism just presented, and that among natural scientists, too, those having a certain measure of philosophical insight take a view which at least approaches this conception.

I shall make it clear that this position (the rejection of the theory of natural selection) is justified and necessary, by discussing briefly a few of the most salient points.

The theory of natural selection operates with three concepts: variability, heredity and selection through the struggle for existence. *Variability* or capacity of modification—adaptability in particular—undoubtedly exists in the world of living things. But whether it is present to the extent that the application of the doctrine of natural selection would require is another question. But I shall admit even this. But an insurmountable difficulty is presented by the additional assumption which then becomes necessary, the assumption, namely: that variability uniformly, or certainly in an overwhelming majority of cases, acts in the direction of greater perfection, or, in other words, that variability is progressive. Have the purely accidental conditions of life always been suitable to the promotion of higher forms and higher degrees of development? If we are to judge by a purely empirical study of variability, this is by no means the case. For we find fluctuations that

hinder as well as those that further the development of the organism and as many of one as of the other.

The general theory of *heredity* does not need to be considered in dealing with the doctrine of natural selection. Only so-called progressive heredity—the transmission of newly acquired characteristics—comes into consideration. For in fact, heredity tends exactly to maintain specific differences and is conservative in character. Now I shall disregard the fact that the whole matter of such a progressive heredity has recently been the subject of much controversy.* Let us proceed on the ground that such progressive heredity actually exists, for if we do not have in mind isolated individual variations but such as often recur when definite and uniform conditions obtain, this progressive heredity must, in my opinion, be held to exist. However, it must be admitted that this general kind of progressive heredity is rather exceptional, whereas, according to the theory of natural selection, it ought to be the rule if not a universal law. For the progressive development could only be explained by progressive heredity if the latter predominated.

The assumption of *discrimination in the struggle for existence* is justified by the analogy of artificial discrimination in scientific breeding. But although scientific breeding has the advantage in many respects over natural selection, since it is here pos-

* Compare Anm. 11.

sible to restrict propagation absolutely to the fittest representatives of the species, all that has ever been achieved by means of it is the production of a definite range of new forms closely related to the parent form. Every process of artificial selection has a limit beyond which every attempt at further development fails. Since this is true in artificial selection, it is by all odds most probable that natural selection, or selection through the struggle for existence, is also limited in its capacity of producing deviations, and consequently, that it is not, in the last analysis, the decisive cause of, but merely contributory to, the evolutionary process. The same conclusion is reached by a closer study of those cases of the operation of natural selection which Darwin and his successors are so fond of citing, namely: the cases of so-called mimicry—of mimicking or masquerading for the purposes of protection. In all kinds of mimicry—protective coloration, assuming the aspect of certain natural objects, or that of related but better protected species—the result is that better chances in the struggle for existence are gained. But does natural selection offer a sufficient explanation of the development of such mimicry? It is assumed to have developed gradually from the most meager beginnings. But natural selection could become effective only after a point is reached where the deviation is so decided as to be of advantage, where the imitation is so good as to mislead the enemy. Hence another principle or another cause must have been

operative to bring about the development up to that point.

We have now considered each of the three most salient factors upon which the theory of natural selection relies. In conclusion let us look briefly at the theory as a whole. It would explain the variation and perfection of species by pointing out that those individuals having such characteristics as are best adapted to the prevailing conditions of life, regularly have the best chance of surviving and of transmitting their characteristics to their offspring. But this leaves completely unanswered the question as to how such characteristics which later prove useful in the struggle for existence originally came into being. This question is not answered because it is really not taken into account. Another question also remains unanswered, the question, namely: as to how the continued and progressive perfecting of species is to be brought about by this process, since it is difficult to see why even very low forms should not satisfy the principle of utility with which natural selection alone operates. It has very properly been asked, what good would it do an amœba, a worm or an insect to be more highly organized, what advantage could a higher stage of development bring to it? And on the other hand, if it was really nothing but the mechanically necessary effect of natural selection which occasioned the perfection of organization, and in the course of millions of years led up to the highest stage of development, the question may and must

be raised as to why organisms of the simplest form still exist. Did no change ever take place in them which might have furnished an opportunity for natural selection to set in? Yet unrestricted variability is a basic tenet of the theory of selection! Or were such changes, if they did occur in isolated individuals, never in the course of millions of years transmitted to their offspring? Yet heredity is the second fundamental tenet of the theory of selection! Or, finally, did these organisms always find such conditions of life that such a selection was never called for? Yet existing conditions of such a nature as to lead to selection constitute the third basic tenet of the doctrine of selection!

As soon, therefore, as the logical consequences of the fundamental ideas of this theory of selection are developed, incongruities are everywhere met with, and we are invariably led to feel that, while natural selection probably played a rôle in the evolution of organic nature, it can by no means serve as an adequate and sufficient explanation of the progressive development of organization. For such an explanation we shall always find it necessary to fall back upon a developmental principle operating from within and having the character of being directed toward an end, a principle which does not depend exclusively upon purely accidental conditions, and which in its turn is best and most intelligibly explained in the world-view of the Christian belief in God.

To be sure, Haeckel, in the last edition of his

"History of Creation," continues to hold to the theory of selection. "The struggle for existence is just as effective in natural breeding, as far as modification and selection are concerned, as is the will of man in scientific breeding. Only the latter proceeds systematically and consciously, while the former proceeds *unsystematically and unconsciously*. This enables us to understand why results which are adequate to meet the conditions can be produced by mechanical causes operating without purpose, just as well as by ultimate aims which are purposive in character. The products of natural breeding are just as purposive in character as the scientific results achieved by man, and even more so. Yet they do not owe their origin to a purposive creative power, but to a mechanical condition operating unconsciously and without purpose." * And again he writes: "When we consider the whole course of the evolutionary development of related forms from a comparative point of view, we see clearly how natural breeding, though operating aimlessly in all directions, slowly brings about a gradual perfecting, finally attaining, after many futile attempts, results like those which are purposive in character, and this by chance." †

Such statements must forthwith be condemned by all who are capable of thinking correctly and logically. Among natural scientists, too, such a condemnation is steadily gaining ground. Follow-

* "Natürliche Schöpfungsgeschichte," 10th ed., p. 247.

† *Idem*, p. 775.

ing the precedent of men like Wigand, Gustav Wolff and Driesch they are coming more and more generally to acknowledge that a rigorous maintenance of Darwin's theory would mean a monstrous distortion of the facts given in organic nature.[45] Thus, for instance, the zoölogist, Pauli, writes: "It runs counter to the logical faculty with which all of us are endowed, to refer to chance the building up of bodies consisting of a complicated system of parts, representing various sorts of material, standing in a relationship of dependence upon one another, joined together as a unit, comprising regulative processes, thinking and acting. . . . To succeeding generations, it will appear as a paradox in the thinking of our time that science dared to ignore this logical compulsion from which man can never be freed, and Darwin could not have fallen into a contrary mode of thinking, if this serious error of judgment, with which his unfortunate principle was connected, had not been obscured in his mind by genuine teleology.*

In conclusion I must add the following remark with regard to the doctrine of evolution as it has been interpreted above. If we subordinate this doctrine to the Christian belief in God, a conception follows forthwith which, although it adheres to a real development in the true sense of the word—to a gradual unfolding of life in accordance with the powers and possibilities put into the organic world to begin with by God, nevertheless at the

* "Darwinismus und Lamarckismus" (Munich, 1905), p. 41.

same time holds the unceasing providential supervision of this development by God to be self-evident, and deems the latter to be excluded by the former just as little as it deems the former to be imperiled by the latter.

Chapter Five

Psychology and the Christian Belief in God

IN the foregoing we have discussed the relation of religious faith to certain fields of knowledge, and to certain judgments and problems with which it is not itself directly and immediately concerned. As yet we have either not taken up religious faith in its uniqueness—its peculiar motives, interests and tendencies—at all, or else we have only incidentally and occasionally referred to them. For religious belief does not spring from knowledge of the outer world, but from those inner experiences and convictions which, welling up from the depth of our souls, force themselves upon us.

The subject we are now to discuss, however, allows us to gain an insight into faith in its own province and in its own language. If we would begin again with the traditional attempts of the ecclesiastic-theological argumentation, it is the so-called ontological proof for the existence of God—in various forms and nuances, of course,—with which we now have to deal.

I shall discuss briefly only the most familiar and the most characteristic of these various forms of the argument. It originated with the scholastic

philosopher Anselm (died 1109), and is to be found in his work entitled "*Proslogium.*"

Anselm begins with prayerful meditation: "Lord God, Thou who givest understanding to faith, grant to me, so far as Thou deemest it beneficial for me, that I may understand that Thou art, as we believe, and that Thou art what we believe Thee to be."

"But we believe," he continues, 'that Thou art the absolutely supreme being (*aliquid quo maius cogitari nequit*)."

With this as a basis he attempts to establish his proof. He argues that the concept of the absolutely supreme being, which he urges to be indispensable for human thinking, cannot be a mere mental image, that is to say, a mere illusion (cannot exist merely in the mind). For if it were a mere mental image it could not be the idea of an *absolutely* supreme being at all, since a being still higher would then be conceivable, namely, any actually existing being. Therefore the concept of the absolutely supreme being must either be left altogether unthought, or else it must be held to designate an actually existing absolutely supreme being. The former, he asserts, is impossible, and therefore only the latter alternative remains.

The valid criticism of this ontological proof was very precisely formulated by Kant as follows: existence being not simply one of various attributes of a concept but a matter or problem to itself, the existence of a thing, in the broadest sense of the

word, can never be deduced from its concept. This is quite right and it disposes of the ontological proof as proof. But it does not dispose of Anselm's line of thought or of the psychological problem which he set up. For obviously that problem is this: How does mankind happen to have the concept of an absolutely supreme, an absolutely infinite being at all?

Man knows himself to be only a finite being, and likewise, he knows the world in which he is placed to be only a world of finite phenomena. In spite of this, how does he get the idea of an absolutely infinite, an absolutely supreme being, exalted above the whole mass of phenomena, indeed exalted above absolutely all phenomena, whether he knows them or merely conceives them to be possible? For although the Christian belief in God is by no means exhausted thereby, it certainly contains this idea most explicitly and forcibly. And every form of belief in God manifestly contains a more or less distinct feeling of this idea. How, then, does man happen to have this idea? For him it means, in truth, an entirely different world—another world beside the world of sense and phenomena which is known to him, and of which he is himself a part. For this world of sense and phenomena the idea of God is altogether useless and entirely devoid of meaning. This world is everywhere finite, limited and relative. Should we not, therefore, suppose that no ideas but those of finite and relative entities could ever arise in the human

mind, or at least that this absolutely different idea, if it should at any time arise, would at once and forever be recognized as empty?

It cannot be said as a rejoinder that the history of human mental life presents more than enough conceptions and ideas which correspond to no reality: dragons and sea-serpents, pigmies and giants, witches and afrites, and other things of this kind. For all of these are within the possible limits of the world of sense and phenomena, and generally even have definite analogies or foundations in it. Genuine spooks and ghosts are always in some way connected with religious faith. They are creations of a naïve and childish or of a pathological religious imagination, or at least of an imagination influenced by religion. Psychologically considered, therefore, they are in the last analysis only imperfect reflections of the idea of another absolutely different world—a world of the "beyond" parallel to the world we know here below. From whence, then, comes this idea, or indeed, even the possibility of it? Not only does its wide existence present a serious psychological problem. For such a problem is even presented by its mere possibility. All the other ideas and creations of the imagination representing unreal objects, some of which were just mentioned, are easy to comprehend in their psychological possibility, and are even fairly obvious. But on the basis of the world of sense and phenomena, the possibility of *this idea* is and remains simply incomprehensible—an absolute riddle.

Chapter V

Does this idea perhaps point, then, to a hidden connection in the depth of the human spirit between it and the world of the beyond? Does it perhaps indicate that man is not merely a link in the world of sense and phenomena, but that he is at the same time a link in the world beyond? that he is, at all events, destined and appointed to be such a link and that he ought to become such? Has premonition for the world of the beyond perhaps been put into his soul, that from a vague feeling it may become more and more clearly and certainly conscious? In the sense of the exact sciences it is, of course, here impossible to furnish "proofs." Wherever matters concerning the higher psychic life are involved, personal convictions cannot be completely eliminated in forming a view. It devolves upon us, then, to set into clearer relief the meaning and the practical value of this idea, as well as its rôle in human psychic life as a whole.

In doing this we shall depart from a point touched briefly in the chapter on epistemology, presupposing, however, what was said above about the independence of the psychic life and its own inherent laws.*

As we saw, our very acceptance of anything as truth is based upon reasoning in a circle. The hypothesis that human beings are capable of knowing "truth" underlies all knowledge as an unproved and unprovable *petitio principii*. But it carries with it also the further assumption that

* See pages 75 ff.

man's life in the world and, indeed, the world itself as a whole has some sort of meaning for him. For otherwise the whole course of the world becomes for him a mere empty farce—nothing but the deceptive veil of Maya. But only the individual for himself can arrive at this assumption or conviction. Considered strictly on its own merits it is absolutely undemonstrable.

Now religious faith is by far the best and surest means of giving the individual this conviction. Religious faith alone is capable of meeting profound doubt as to the meaning of the world and of life. Only religious faith can erect an insurmountable barrier against the fundamentally and consistently pessimistic view that the world and all human life in it are meaningless.

In our day no one has felt this more strongly or described it more graphically than Leo Tolstoi.[46] He combined an astonishing gift for psychological introspection with the ability of masterful presentation. In his "My Confessions" he gives us a deep insight into the terrible struggles of his completely distracted soul, and then describes his final liberation from this agonizing state of mind.

It was just after the completion of his great novels. He was at the height of his literary fame, and besides, his circumstances were in every way comfortable, indeed, happy. Health, a happy family life and wealth were all his. In spite of this life began to seem flat and empty to him just at this time. For at this height of success the question of

the meaning and purpose of life had to arise in his mind, and to it he found no answer. He had cast religious faith aside in his sixteenth year. Even earlier he did not, as he judged later, have true faith, but he had trusted in the religious traditions of his church only under the influence of the authority of his elders. But the superficiality which he then saw everywhere about him, in the whole religious life of his environment and in the church, completely estranged him from religion. Hence, when later these questions as to the meaning and purpose of life arose in his mind, his thoughts did not immediately turn to religion. But the problems became increasingly insistent. When they began to dawn upon him he had believed that he would soon dispose of them, since the answer must be easy to find. But he began to realize more and more clearly how terribly mistaken he had been. Indeed, instead of the answer being easy to find, the longer and the more seriously he reflected upon them and the more seriously he studied them, all the more distressing did these questions become. Over and over again he tried to solve them by all the means which human life suggests. But all failed miserably. Working for his family with all its joys and cares, which had for years been his whole thought, failed to satisfy him, for the problem as to the meaning and the purpose of existence holds for the family just as much as it does for the individual. Art, in which he had accomplished so much, became of no avail, for as a "mirror of life"

it only showed him "how desperate his plight was." Science also failed him, for all that it could offer merely showed how inadequate it was to furnish a solution for these problems.

One way of escape, however, still remained open to him. Just as so many people are not concerned over these problems, so he might ward them off by ignoring them. But, as a matter of fact, this course was no longer possible for him. Having come to realize the importance of these problems he could not fall back to an attitude of stupid indifference. "For what purpose do I live? Why should I work? Is there in life any purpose which the inevitable death which awaits me does not undo and destroy? These questions are the simplest in the world. Without an answer to them it is impossible, as I experienced, for life to go on." * So for a long time he harbored thoughts of suicide. But a certain vital instinct, coupled with the hope of being able to discover a meaning in life, always restrained him from putting these thoughts into execution. He took up hard agricultural labor and found occasion to observe the simple folk who find happiness and peace in their faith, however much it may be permeated with superstition. And then, he too finds a real remedy for his distressed soul.

"Since mankind has existed, wherever life has been, there also has been the faith that gave the

* I have taken this and the following quotations from Tolstoi from William James' "Varieties of Religious Experience." *Tr.*

possibility of living. Faith is the sense of life, that sense by virtue of which man does not destroy himself, but continues to live on. It is the force whereby we live. If man did not believe that he must live for something, he would not live at all. The idea of an infinite God, of the divinity of the soul, of the union of men's actions with God—these are ideas elaborated in the infinite secret depths of human thought. They are the ideas without which there would be no life, without which I myself would not exist. I began to see that I had no right to rely upon my own individual reasoning and neglect these answers given by faith, for they are the only answers to the question of the meaning of life. . . ."

"And again there arose in me, with this thought, glad aspirations toward life. Everything in me awoke and received meaning. Why do I look further? a voice within me asked. He is there, he without whom one cannot live. To acknowledge God and live is one and the same thing. God is what life is. Well, then, live, seek God, for without him there is no life! . . ."

"After this things cleared up within me and about me better than ever, and the light has never wholly died away. I was saved from suicide. Just how or when the change took place I cannot tell. But as insensibly and gradually as the force of life had been annulled within me, and I had reached my moral death-bed, just as gradually and imperceptibly did the energy of life come back."

Tolstoi's experience is extraordinarily valuable because it is based upon the most severe sincerity with himself. Tolstoi attacked the problems which life offers—every life and by no means simply his own—with a strength of purpose unusual for the general run of mankind. He allowed no subterfuge to swerve him from his path, and he was never satisfied with any partial solutions, which, after all, always leave the main point unanswered. His only concern was to find an answer to the final and decisive question—why and to what purpose is the whole of life?

And is not Tolstoi really right when he suggests that as long as religious faith is left out of consideration only two possibilities remain, namely: dull animal existence and suicide? Dull animal existence may find expression either in a stupid resignation which gives up asking why or wherefore, or in a heedless enjoyment of life according to the principle "Let us eat and drink, for tomorrow we die." Sober-minded people find both alternatives intolerable in the long run, or are thrown back completely to the level of mere animal existence. But suicide is simply a mockery of the whole of life!

Yet this is the inevitable alternative which the enigma of life presents to man so long as he insists upon entirely disregarding religion and its belief in God. Here every one—at least every one who sees deeply and thinks seriously, must answer yes or no. There is no middle course. Least of all is

any such middle course, or any kind of satisfactory solution to this problem, provided for in a mere reference to an actual progress in the history of mankind, the reference, that is to say, to any sort of higher development of life. For such talk of progress and higher development hangs completely in the air so long as no final aim and goal can be assigned. For without a goal all bearings are lacking, indeed, every possibility of their being such bearings is lacking. For how can progress be recognized as real progress when we simply do not know what line of development is in question? Tolstoi is quite right when he says that the vague belief in progress is just as foolish, as it would be for a man driven hither and thither in his skiff by wind and waves on the ocean to be satisfied with the answer "I am drifting somewhere" to the question, which is for him all-important, "Whither shall I steer?"

Thus we cannot get away from the fact that only religious faith in God gives a really satisfactory answer, because it alone knows a fixed and immutable goal, a goal which is not, indeed, inherently foreign to the human soul, but accords fully with its deepest and most important faculties and its most fundamental instincts—its impulse and yearning for life, its eagerness for a richer and a more exhalted life. Only living union with God offers such a goal, only the growing into the perfect life of the transcendent God can give to these instincts a hope of enduring satisfaction.

However, with all these remarks we have gone far beyond the original statement of our investigation. We began with the reflection that all human knowledge of truth must be based upon the assumption of a final and consistent truth being in some way or another attainable for man, and also upon the further assumption that the world and life in it are not without meaning and aim. But this assumption, again, only gets a meaning and a consistent form in religious faith. And this practical importance of faith is by no means restricted to the fundamental problem and to the domain of the understanding. It holds just as much for all other phases of the mental life of man and hence ultimately for the whole of human civilization. Love, vocation, social activity, and, in fact, the whole of ethical life get their full meaning only under the point of view of religious faith, and only thus are they really established. When developed purely on its own merits ethics lacks the necessary grounding in the eternal and absolute. Hence the danger is that it may fall back into the relative, and therefore into utilitarianism and eudæmonism. To be sure, moral obligation is absolute in itself and demands absolute obedience for its own sake. But, in the first place, this is only a purely formal characteristic which points as such—as a psychological symbol—to the very essence of what is ethical, but it does not of itself constitute the ethical. On the other hand, ethics, when brought into connection with religion, that is to say, when the moral

good is made equivalent to the will of God, need not fear the charge that it thereby looses its autonomy in the sense of Kant. That is to say, such an ethic need not fear that it has become dependent upon an external authority, and that it is, therefore, ultimately founded upon such an external authority. For in the sense of religion—of the Christian religion at least—the will of God is not an external authority for man. It certainly is not *intended* to be an external authority, since according to its conviction man is called and fitted for living union with God, and that means just this: he is fitted and destined, and therefore also in duty bound, to grow more and more, and, in the end, to grow completely into the *will* of God. For in its highest form living union is community of will—a unity of will.

The testimony of many others besides Tolstoi could be cited to prove that the belief in God of religion can bring complete and enduring satisfaction to the human being, even when he has fallen into the direst spiritual distress and the most serious doubts. Only in passing shall I mention Augustine, who, at the very beginning of the "Confessions," sums up the result of the experiences and conflicts of his whole life: "O Lord, thou hast made us for thyself, and our souls are restless until they find their rest in thee."

But to meet the objection that such testimony proves little for the modern man because it rests upon and is determined by the whole mental attitude of this remote period, I shall add the testimony

of several recent writers. They are taken from the collection entitled "The Varieties of Religious Experience," compiled by the American philosopher and psychologist of religion, William James.

I select as the first illustration pages 66 ff.

"I remember the night, and almost the very spot on the hill-top, where my soul opened out, as it were, into the Infinite, and there was a rushing together of two worlds, the inner and the outer. It was deep calling unto deep—the deep that my own struggle had opened up within being answered by the unfathomable deep without, reaching out beyond the stars. I stood alone with him who had made me, and all the beauty of the world, and love, and sorrow, and even temptation. I did not seek him, but felt the perfect unison of my spirit with his. The ordinary sense of things around me faded. For the moment nothing but the ineffable joy and exaltation remained. It is impossible fully to describe the experience. It was like the effect of some great orchestra when all the separate notes have melted into one swelling harmony that leaves the listener conscious of nothing save that his soul is being wafted upward, and almost bursting with its emotion. The perfect stillness of the night was thrilled by a more solemn silence. The darkness held a presence that was all the more felt because it was not seen. I could not anymore have doubted that he was there than that I was. Indeed I felt myself to be, if possible, the less real of the two.

"My highest faith in God and truest idea of him

were then born in me. I have stood upon the Mount of Vision since, and felt the Eternal round about me. But never since has there come quite the same stirring of the heart. Then, if ever, I believe, I stood face to face with God, and I was born anew of his spirit. There was, as I recall it, no sudden change of thought or of belief, except that my early crude conception had, as it were, burst into flower. There was no destruction of the old, but a rapid wonderful unfolding. Since that time no discussion that I have heard of the proofs of God's existence has been able to shake my faith. Having once felt the presence of God's spirit, I have never lost it again for long. My most assuring evidence of his existence is deeply rooted in that hour of vision, in the memory of that supreme experience and in the conviction, gained from reading and reflection, that something the same has come to all who have found God."

Compare with this the account of the crisis of his life given by the eminent French Protestant, Adolph Monod, taken by James from Monod's book, "La Vie," and one of his letters:

"My sadness was without limit, and having gotten entire possession of me, it filled my life from the most indifferent external acts to the most secret thoughts, and corrupted at their source my feelings, my judgments and my happiness. It was then that I saw that to expect to put a stop to this disorder by my reason and my will, which were themselves diseased, would be to act like a blind

man who should pretend to correct one of his eyes by the aid of the other equally blind one. I had then no recourse save in some influence from without. I remembered the promise of the Holy Ghost; and what the positive declaration of the Gospel had never succeeded in bringing home to me, I learned at last from necessity, and believed, for the first time in my life, in this promise, in the only sense in which it answered the need of my soul, in that, namely: of a real external supernatural action, capable of giving me thoughts, and taking them away from me, and exerted on me by a God as truly master of my heart as he is of the rest of nature. Renouncing then all merit, all strength, abandoning all my personal resources, and acknowledging no other title to his mercy than my own utter misery, I went home and threw myself on my knees, and prayed as I never yet prayed in my life. From this day onward a new interior life began for me: not that my melancholy had disappeared, but it had lost its sting. Hope had entered into my heart, and once entered on the path, the God of Jesus Christ, to whom I then had learned to give myself up, little by little did the rest."

Now the question arises as to whether, on the basis of our psychological considerations, it is possible for us to reach a decision as to the *idea of God* itself, or, to put it more precisely, concerning our specific interpretation of this idea. In the discussion of the cosmological and the teleological arguments we had to stop short of such a decision, or,

at least, we could only reach it conditionally and with many critical reservations. There the pantheistic form of belief in God which identifies God with the evolutionary tendency of the cosmos, and therefore seeks and knows God only in the "All," remained possible alongside of the properly theistic form as it finds its most perfect expression in the Christian religion, where the essence of God is defined as spiritual and ethical.

In taking up this question, now, on the basis of the psychological results adduced, I need hardly point out again that obviously here, too, we cannot speak of real "proof" in the sense of exact demonstration. Indeed, the question can only be: What concrete form of the idea of God best corresponds to the active religious motives of the belief in God.

But, as a matter of fact, the preceding discussion plainly contains certain hints and suggestions which are all in favor of the theistic and against the pantheistic conception of God. Only when the belief in God attains the theistic form can it really accomplish the task which forms its psychological significance. The words of Augustine, "our souls are restless until they find their rest in thee," bring the various elements discussed above into a single thought, and quite plainly demand a theistic conception of God. Only when the divine being is of a spiritual and personal nature can the human soul really "find rest" in him.

The quotations from James show the same thing

by a variety of expressions. Even more characteristic and interesting in this respect is the following account, which is also taken from James' book:

"Between twenty and thirty years I gradually became more and more agnostic and irreligious, yet I cannot say that I ever lost that indefinite consciousness which Herbert Spencer describes so well, of an absolute reality behind phenomena. For me this Reality was not the pure Unknowable of Spencer's philosophy, for although I had ceased my childish prayers to God, and never prayed to It in a formal manner, yet my more recent experience shows me to have been in a relation to It which practically was the same thing as prayer. Whenever I had any trouble, especially when I had conflict with other people, either domestically or in the way of business, or when I was depressed in spirits or anxious about affairs, I now recognize that I used to fall back upon this curious relation I felt myself to be in to this fundamental cosmical It. It was on my side, or I was on Its side, however you may please to term it, in the particular trouble, and It always strengthened me and seemed to give me endless vitality to feel Its underlying and supporting presence. In fact, It was an unfailing fountain of living justice, truth and strength, to which I instinctively turned at times of weakness, and It always brought me out. I know now that it was a personal relation I was in to It, because of late years the power of communicating

with It has left me, and I am conscious of a perfectly definite loss." *

In this connection Tolstoi's experience is again very characteristic and instructive. For a long time he wavered between the theistic and the pantheistic forms of faith, which is quite easy to understand when we remember that the concrete form which the theistic conception has been given in the tradition of the orthodox church could not, of course, satisfy him. Added to this was the fact that pantheism seemed to him more suitable for his purpose of striving for religious unity, that is, of bringing about a universal religion uniting all peoples. The devil so ensnared him (this is his own later opinion) that he thought it possible and especially important in the interests of unison with the Chinese, Confucianists and Buddhists, as well as with the philosophically interested atheists and agnostics, to avoid entirely the "idea of the Father" in the sense of the New Testament. But later on, and precisely because of his own religious experience, he came to realize that such an undertaking would jeopardize religious purity and depth. As he himself puts it, he felt that he was suddenly falling into spiritual decline, that he became incapable of every intellectual joy and energy, without clearly understanding at first the reason for this. "Only then did I bethink myself that this was due to the fact that I had departed from God. And I began to think, it is strange to say it, I even began

* *Op. cit.*, p. 64 f.

to guess whether there is a God, and a feeling came over me as though I had found him anew. And I felt so joyful over this because my conviction in him was so firmly established, *the conviction that I can and must commune with him and that he hears me.*" *

In fact, it is impossible to have a really personal religious relationship with an impersonal Absolute. It is true, of course, that one may gain a personal relationship even with impersonal objects—with things, or with abstract ideas and concepts. But the idea that this can be made the basis of an attack upon the theistic conception of God is due to a lack of appreciation of the specific character of the *religious* relationship itself. For it is always in some way a *relationship of subordination.* Indeed, according to religious faith, the "other" world or the world of the "beyond" is absolutely supreme over the world of sense and phenomena, and the latter has value only because of its relation to the former. Therefore, the devout not only desire to but must subordinate themselves unconditionally to the "other" world. On the other hand, however, they are as ethical personalities *superior* to everything material and impersonal. Hence there cannot be a profound and enduring relationship with an impersonal Absolute, at least not on the plane of spiritual and ethical religion. But fundamentally only religion on this plane, however often religious practices even within the evangelical

* "Gedanken über Gott," XX.

church may continue to fall below this high level, can seriously concern us.

At the same time these reflections lead us to a wider view, that is, to a view which takes into consideration also the realm of nature and its development.

Not to think of the divine being as personal and spiritual is to subordinate it to the highest level of the development and unfolding of life already attained in the world of sense. But this not only contradicts the fundamental motive of the religious consciousness but also the teleological conception of nature. The original reason and the final purpose of the world as a whole would then lie in a form of existence which could be, and already has been surpassed in this world! And thus, in the end, we would be pushed back to pure atheism.

As I have already frequently emphasized, theistic belief in God has found its purest expression in the Christian religion. It is, therefore, absolutely necessary to turn our attention more explicitly to the characteristic features of this Christian belief in God, or, more exactly, to the idea of God which it involves. That will at the same time furnish the best refutation of the familiar objections, which, even in present-day philosophy, are often raised against it.

The Christian religion is that form or stage of religious life which, based upon the piety of the Old Testament, arose under the influence of the personality of Jesus Christ. If we wanted to

consider the historical process of development for itself and to describe it in detail, we should, above all, have to keep in mind the fact that the Jewish piety of the Old Testament had, even at that time, been exposed for a considerable period to the influences of other religions and civilizations, especially those of Persia and Babylonia, but also those of Greece, and that these influences continued during the time in which Christianity itself was developed. Assuming this to be generally known and admitted, I shall not go into the particulars of those influences. For to know what the special historical factors which concurred to bring about the establishment of Christianity were does not matter so much to us as it does to know what the distinctive fundamental character of Christianity and of its belief in God is, whatever its historical origin may have been.

For this purpose we must here call attention to that element in the history of the development of Christianity which we have already emphasized: the Christian religion is that stage of religious development attained under the influence exerted by the personality of Jesus Christ. This element is unquestionably the really decisive factor in the whole matter. All other elements that may have come into play, whatever their number, have received their characteristic form only through it, since it has become the fixed point of reference for all of them, and has served as the foundation upon which their own trend and purpose have been

shaped. At the same time, it was not merely effective during the period of development, but it is the element which has *remained* effective throughout the whole history of the Christian religion, and that, too, as the absolutely decisive factor.

For the Christian religion is not simply that stage of development which arose under the influence of the personality of Jesus Christ, but it is that stage which has always continued to be, and is even today, determined by just this influence of the personality of Jesus Christ. Just as this influence of the personality of Jesus Christ created *the decisive psychological motive* which moved the first Christians to establish a new religious community, so also it has continued, and even to the present day still continues to affect all deeply religious natures, acting as the decisive psychological motive impelling them to turn to the Christian religion, or to remain consciously faithful to it.

Indeed, the New Testament is, on the whole, only the reflection of the impression made by the personality of Jesus Christ—with various refractions and radiations of the light to be sure, but, nevertheless, in the last analysis, a reflection consistent in all its parts and producing a single effect.

In this picture of Jesus as it is drawn in the New Testament, two traits stand out plainly as the most characteristic features—and they are the traits which have always proven to be the strongest throughout the history of Christianity—the close personal relationship of Jesus to God, his "Father,"

and the thorough-going ethical character of his conduct and conception of life.

This enables us to understand the fact that the ethical and personal character of the divine being constitute the decisive element in that belief in God conceived under the influence of Jesus Christ. The God of Christian faith is a spiritual and personal, more exactly, an ethical and personal God. *Spiritual ethical personal life characterizes the fundamental nature of his being.*

This serves to give two other essential attributes of God a more definite form, as well as to establish their intimate connection in Christian faith, namely: the transcendence and the immanence of God in his relation to the world.

For although in almost all other religions, as well as in most systems of philosophical world-views, transcendence and immanence are regarded as mutually exclusive attributes of the being of God, one of them always being maintained in contrast to the other, it constitutes one of the unique features of the Christian religion that it asserts equally both the transcendence and the immanence of God, and that it only admits one of these two characteristics of the essence of God when it is limited by the other.

For Christian faith God is, indeed, the absolute Lord of all reality, and as such an absolutely transcendent God, exalted above the finiteness, the transitoriness and the relativity of the whole sense-world. In this regard the Christian religion

consciously and purposely follows what is manifestly the tendency of faith in God even in the Old Testament. The Lord of the "Kingdom of Heaven," or of the "Kingdom of God," as the first Gospel expresses it, must, of course, be an absolutely transcendent God because this "Kingdom of Heaven" is itself absolutely supramundane—completely beyond the world. "My Kingdom is not of this world" says Jesus in the fourth Gospel, describing his "Father's" kingdom as his own. Yet, on the other hand, this absolutely transcendent God has, according to Christian belief, a most vital connection with the world. He it is who "maketh his sun to rise on the evil and on the good, and sendeth rain on the just and the unjust" (Matthew V, 45). He feedeth the birds of the air and careth for the lilies of the field (Matthew VI, 26 ff.). Apart from his will not a sparrow falls to earth or a hair from our head (Matthew X, 29). Hence, too, when Paul says that all things are of God he forthwith adds that this God is for us the goal of the destiny of our life (I Cor. VIII, 6). And he gives expression to the thought which connects these two ideas when he says that the whole creation groaneth and hence yearneth after God (Romans VIII, 22).

Thus, despite his altogether transcendent nature the God of the Christian religion still pervades the world as a living God. And this especially holds with respect to man—collectively, that is to say, in his whole historical development, as well as in-

dividually. "He made of one every nation of men to dwell on all the face of the earth, having determined their appointed seasons, and the bounds of their habitation; that they should seek God, if haply they might feel after him, and find him, though he is not far from each one of us: for in him we live and move and have our being," (Acts XVII, 26 ff.). Hence the real mission of the Christian religion is, as is stressed and set forth in detail especially in the fourth Gospel, to bring mankind, appointed for God, toward and into life communion with God.

Consequently there are in all three factors which together, and only through their intimate connection, determine the nature of God as conceived by the Christian religion: the absolute and ethical personality of God, the absolute transcendence or sublimity of God and the absolute immanence or pervasiveness of God. These three factors are indissolubly connected together. If the purity and the completeness of the Christian conception of God are not to be jeopardized, each of these factors must be fully taken into account.

But in thus reducing the Christian belief in God to its final elements have we not, at the same time, criticised and condemned it? Does not this belief in God necessarily lead to a self-contradictory conception of God? To begin with, are not transcendence and immanence incompatible attributes, and does not their association show that a conception of God which seeks to unite them must therefore

be logically untenable? In meeting such an objection it must, above all, be emphasized that faith as faith can certainly not be disturbed by doubts of this kind. For faith does not arise from logical considerations and conceptual determinations, but from its own consciousness of God. And if in this consciousness of God elements are found which appear mutually contradictory to the rational reflection, it must be remembered that, for the purely rational conception of the finite and earthly intellect, this consciousness of God is itself simply an irrational thing. But just as man can, in spite of this, attain the conviction that a superior reason is displayed precisely in this irrationality, so he will also be able, though he cannot completely solve this apparent self-contradiction on an intellectual basis, to grasp, nevertheless, its crucial import, and thus to find a deeper meaning in it.

To accomplish this we must realize at the outset that the three factors characterizing the nature of God as conceived by Christian faith are really not of equal importance, but that the first factor, the ethical personality of God, is predominant over the other two.

Now what does this characteristic of the ethical personality of God mean for Christian faith? Again this must be determined more exactly from Christian religious conviction and experience. In its specifically Christian form, religious conviction is "*the believing*" as exhibited in the New Testament,

that is to say, "*the believing*" as absolute confidence in the holy and loving will of God.

Now we use the concept "personality" in two essentially different senses. One of these is purely or at least predominantly formal. When the concept is applied to God in this sense God is characterized as nothing more nor less than an independent individual, who is, so to speak, self-existing. But from the point of view of the Christian belief in God the factor of the personality of God is barely touched upon, much less exhausted, in this meaning of the concept "personality." For the chief concern of the Christian belief in God is not with any purely formal characteristic, but altogether with the content of the idea. From the point of view of faith the conviction that God is a personal God means that his innermost essence lies in the line of our own spiritual and ethical personality, and that faith can vaguely grasp the meaning of God as personality only through this analogy. However, we must emphasize the fact that the innermost essence of God lies in the line of our own spiritual and ethical personal life—in the extension of this line, of course, but really only in the extension of just *this* line. It is, therefore, just in our ethical life as personalities that we experience God most surely, most strongly and most immediately—in the depth of our own soul when we become conscious of its ethical nature. But all spiritual personal life depends upon the definiteness of the will by which it is regulated. The more unified and

constant is this will, the more perfect can the life as a personality become. Perfect personal life would be or is attained when the will directing it can be judged to be absolutely unswerving and, at the same time, absolutely ethically determined. Faith in God as living and personal, then, means being convinced of the absolute continuity and consistency of his ethical will. Only in a God who is such a uniform ethical will can we really "believe," only in such a God can we have real and implicit confidence. For apart from the continuity of will this confidence would be groundless. And it would also be groundless if his will did not possess ethical definiteness, since only the ethical will can guarantee complete continuity. For every will is continuous, and therefore worthy of confidence, to the degree in which it is ethical. Thus the faith of the Christian religion, as implicit confidence in the holy and loving will of God, presupposes the unity and the absolute ethical definiteness of this will.

Only on the basis of what has just been said can we get a complete understanding of the other two factors which, according to Christian faith, are also decisive in characterizing the nature of God, namely: the absolute transcendence and the absolute immanence of God in his relations to the world.

The purport of the idea of immanence for the Christian belief in God is that the consistent and ethical fundamental will of God pervades the world

as a living force, and that it determines and guarantees a meaning and purpose for the development of the world.

And the idea of transcendence emphasizes for the Christian belief in God, above all, that in its nature and essence God's absolute and ethical loving will, which rules and pervades the whole world, lies infinitely beyond all the bustle and stir of the world of sense and phenomena, so that this phenomenal world cannot have any sort of real or absolute value, except through its relation to this ethical and loving will of God.

Thus formulated transcendence and immanence cease to be contradictory attributes of the divine being, but reveal themselves, on the contrary, as the mutually supplementary factors for the more precise conception of the character of God as ethical and living personality. Hence, when these attributes are given such a meaning in other religions, and in the systems of philosophical speculation, as to make them mutually exclusive, this is due to the fact that the ethical and personal character of the nature of God is not sufficiently emphasized, or that its real meaning is not grasped in these religions and philosophical systems.

But that transcendence and immanence are really mutually supplementary as elements of Christian faith is confirmed, indeed, by the fact that both are already to a certain degree active in the human soul. For in his own spiritual and ethical personal life man begins to feel the reality and

the significance of an "Absolute," of a world of absolute values which lies completely beyond the world of phenomena. Hence, too, the religious and metaphysical consciousness of man arises most strongly from his own spiritual and ethical personality. And it is this religious and metaphysical consciousness which lifts man above the whole sense-world, and brings him into the world of absolute reality—the world of God and his holy loving will.

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If, now, we undertake to consider as a whole what we have just discussed severally and specifically, and to bring it into a precise form in accordance with thinking reflection, we can say that the conception of God corresponding to the Christian belief in God is that of the *unified totality (einheitliche Allheit) of spiritual ethical personal life.*

To be sure, this concept of unified totality also seems to involve a self-contradiction. But it does so in no greater degree for the sphere of the absolute than does the concept of unified diversity for the domain of the finite. And such unified diversity is an actual fact.

Modern biology rests absolutely upon the recognition of the fact that all life is ultimately reducible to the simple cell, and that all higher organisms are built up from and are composed of aggregates of such simple cells. Every higher organic being, including man himself, represents an aggregate

composed of an infinite number of most primitive organisms. Yet the human being is not merely an aggregate of atoms. No human being can be identified forthwith with the sum of the individual cells constituting him a human being. On the contrary, the human being, the personality, differs infinitely in its nature and importance from the individual cells. For the personality dominates over them, often disposes of them at will and remains unaffected by the fate and by the continual changing of large quantities of them. There are other analogous conceptions in biology. I shall only call attention to one more, which has already been mentioned incidentally. Not very long ago the cell was thought to be an absolute unit, that is to say, an entity not composed of further constituent elements and simply indivisible. In recent years biologists have abandoned this view. It has been found that the individual cell is in its turn a highly complex phenomenon, and that it is made up of a countless number of still simpler elements of life.

Thus we have here before us in various nuances, and others still might be cited, the phenomenon, or rather the fact that a unity of life exists by virtue of a multiplicity or community of life, but is by no means identical with it either in nature or in import or in meaning. If we pass now, in accordance with this analogy, from the sphere of sense and appearance and its relativity to that of absolute reality, and if, accordingly, we conceive God as the unified totality of spiritual and ethical personal

life, we shall avoid the difficulties of the naïve anthropomorphic conception of God, and shall still avoid, on the other hand, the ultimate results of pantheism, however sublime and highly philosophical this may be, which sees the deity simply in the spiritual life as a whole and completely identifies God with this spiritual life as a whole. For when interpreted in accordance with the analogy referred to, this conception of God is proof against every pantheistic corruption. It neither requires the complete merging of every individual mortal personality into the universal All, nor does it lead necessarily to an "eternal restitution," a final and equal salvation for all. Indeed the contrary seems rather to be suggested even by the analogy itself, and all the more if we take into consideration, with reference to the first point, that the diversity of the various developmental stages of life naturally carries with it diversity in their relationships among one another. The most primitive living entities—the cells, may lose their autonomous character until they appear only as component parts of a whole, dependent upon it in the discharge of their functions. Hence, in higher organisms they no longer truly represent individual entities as they often really do in lower organisms. Spiritual personalities, however, cannot pass over into one another at all, and so they invariably and necessarily remain real individual entities.

The final objection might be raised that this

analogy must lead us to hold that the conception of the deity as the all-embracing unification of personal life could only have arisen from the multiplicity of creatural life and through its mediation. But this objection would be entirely unwarranted. It would only be warranted if the biological conception of development on which it is based were taken in the special Darwinian sense, that is to say, in the sense that the development of creatural life was regarded as taking place *naturally and of itself*. But this would not only be a complete begging of the question, but on purely scientific grounds this is, as we have seen, a most dubious hypothesis. There is, then, every reason to believe that there must be a living power behind the development of creatural life, or, differently expressed, prior to it, determining its purpose and directing it; and that this power receives into union with itself those creatural forms of life which attain spiritual life as personalities, without destroying their individuality: primordial and all-embracing unity of spiritual ethical personal life.

If the attempt here made to analyze the Christian conception of God on the basis of modern thought be deemed acceptable, it would then follow that the Christian religion must be considered the truly absolute religion, not merely in the sense that it represents the highest form of religious development among people upon this earth yet known to us, nor merely in the sense that this development will probably never lead to a more perfect form of

religion, but more than this, the Christian religion would then be *the highest plane of religious life in an absolute sense, because it would be the highest plane of all creatural life*. And this would hold no matter when or where life has originated and developed or shall originate and develop, no matter on what other distant heavenly body, whether belonging to the system of fixed stars bounded by the milky-way, or to another system beyond.

For accepting the theory of the universe set up by Copernicus and Newton, we must, it seems to me, necessarily leave open, theoretically at least, the possibility that life may not be restricted to the earth. The taking of this possibility into account has an appreciable bearing on our final conception of the absoluteness of the Christian religion. Against this hypothesis it will not do to insist upon the limitations of human experience. For it is precisely when the standpoint of experience is really seriously maintained that it must be considered more than probable that life is not confined to this little world of ours. If this were not true, how could such a view have seemed so natural and obvious to a scientist so matter of fact and empirical as Helmholz,[47] to say nothing of the philosophers, all of whom, since the days of Kant, have taken it into consideration? Hence it is inadmissible to urge experience against this view. At best, it could only be put forth as a postulate of religion or of the Christian belief in God that life must be restricted to the earth. But it seems to me that there is little

occasion for such a postulate and that the opposite hypothesis is the most natural one to make under the conception of the Christian religion as the absolute religion.

For then the Christian religion must certainly be accepted as the absolute religion in the sense that it represents the highest plane of all religious life pure and simple, because it represents the highest conceivable plane of all creatural life.

It is precisely for this reason that the Christian religion can give a satisfactory answer to the problem of the meaning of the world and of human life: the final aim and real purpose of the world is to develop ethical and spiritual personalities and to bring them into living communion with God!

Notes and References

TRANSLATOR'S NOTE: I have shortened considerably this part of the book by omitting lengthy quotations and comments, as well as some references to German books. English translations of some of the books mentioned by Dr. Wobbermin are indicated at the close of the note in which they are mentioned.

[1] *Alois Riehl* gives an important discussion of Nietzsche's philosophy in Frommann's Sammlung der Klassiker der Philosophie (5th ed., Stuttgart, 1909). Riehl discusses Nietzsche first as a man, then as an artist and finally as a thinker.

H. Vaihinger: Fr. Nietzsche als Philosoph (3rd ed., 1905), shows instructively how far the peculiar ideas of Nietzsche are capable of being brought into a unified relation.

Of the additional very extensive Nietzsche literature I would mention, as especially important from the point of view of religion and theology, the following:

Ritschl, Otto: Nietzsche's Welt- und Lebens-anschauung in ihrer Entstehung und Entwicklung (2nd ed., 1899).

Rittelmeyer, Fr.: Fr. Nietzsche und die Religion (2nd ed., 1911).

Kaftan, Jul.: Aus der Werkstatt des Übermenschen, 1906.

Grützmacher, R. H.: Nietzsche, 1910.

Richter, R.: Fr. Nietzsche, sein Leben und sein Werk (2nd ed., 1909).

Schwarz, A.: Zum Verständnis von Nietzsches Zarathustralehre, etc., 1901.

I want expressly to emphasize, once more, that my discussion of Nietzsche's *Mitternachtslied* is not intended as an "interpretation." I merely aimed to bring out the psychological point at which the underlying motive of this poem and that of religion are connected. Compare in general Nietzsche's own works. I have quoted from the complete edition (Naumann, 1899 ff.).

See Friedrich Wilhelm Nietzsche's complete works, first complete and authorized English translation, edited by Dr. Oscar Levy (18 Vols., Macmillan, 1910).

[2] *Avenarius, R.:* Der Kritik der reinen Erfahrung appeared first in two volumes in 1888–90. It has recently been republished in a second edition by *J. Petzoldt* (1907). Avenarius' smaller work: Der menschliche Weltbegriff, (1881, new ed., 1905) should also be mentioned. For writings by his disciples consult the Vierteljahrsschrift für wissenschaftliche Philosophie, and also Petzoldt: Einführung in die Philosophie der reinen Erfahrung (Vol. I, 1900, Vol. II, 1904).

Of the writings against Avenarius and his school I would give first place to the work of *W. Wundt*, published as the second part of his voluminous discussion of naïve and critical realism. (See Vol. XIII of his Philosophischen Studien, pp. 1–105 and 323–434.) It has been republished in his Kleinen Schriften (I, 1910, pp. 259 ff.).

E. Mach, of Vienna, originally a physicist, but now a philosopher, is in many respects similar to Avenarius, as well in his general philosophical position as in his position to belief in God. See especially his: Die Analyse

der Empfindungen und Das Verhältnis des Physischen zum Psychischen (5th ed., 1906).

I have myself, and especially from the point of view of theology, given a critical discussion of the philosophy of pure experience, regarding it as similar to the position of Mach. See Part II of my Theologie und Metaphysik: Das Verhältnis der Theologie zur modernen Erkenntnistheorie und Psychologie, 1901.

[3] The interesting discussion of evolution by Kant in paragraph eighty of the Critique of Judgment (see J. H. Bernard's translation) has recently been brought to notice by Haeckel (Natürliche Schöpfungsgeschichte, 10th ed., pp. 92 f.), and by Liebmann (Zur Analysis der Wirklichkeit, 3rd ed., pp. 344 f.).

[4] In this connection see especially *Troeltsch, E.:* Das Historische in Kants Religionsphilosophie (in Kantstudien, 1904). *Cf.* also *Menzer, O.:* Kants Lehre von der Entwicklung in Natur und Geschichte, 1911.

[5] *Cohen, H.:* Kants Theorie der Erfahrung (2nd ed., 1885). System der Philosophie (Vol. I, 1902, Vol. II, 1904). Religion und Sittlichkeit (1907).

Natorp, P.: Die Religion innerhalb der Grenzen der Humanität (2nd ed., 1908). Philosophie, ihr Problem und ihre Probleme (1911).

Cf. also *Cassirer, E.:* Sunstanzbegriff und Funktionsbegriff, 1910.

[6] *Cf.* Anm. 2.

[7] The name *Immanence Philosophy* is intended to mean that its advocates do not depart from the pure immanence of consciousness, that is to say, they limit themselves strictly to analyzing and synthesizing the facts given in consciousness.

Schuppe, Wilh.: Erkenntnistheoretische Logik (1878).

Grundriss der Erkenntnistheorie und Logik (2nd ed., 1910).

Rehmke, Joh.: Die Seele des Menschen (2nd ed., 1905). Zur Lehre vom Gemüt (2nd ed., 1911).

[8] *Liebmann, O.:* Zur Analysis der Wirklichkeit (4th ed., 1910). Gedanken und Tatsachen (1899–1905). Cf. also Kantstudien, Vol. XV, No. 1, 1910 (published in honor of Liebmann's seventieth birthday). It contains valuable essays by E. Adickes, R. Hönigswald, B. Bauch, F. Medicus, *et alia.*

Riehl, Al.: Der Philosophische Kritizismus (2 Vols., 1876–77). A new edition is now appearing (Vol. I, 1909). Zur Einführung in die Philosophie der Gegenwart (3rd ed., 1908). Of the followers of Riehl, Bruno Bauch and Richard Hönigswald should be mentioned as being discreet and sagacious epistemologists.

[9] Of the writings in opposition to Haeckel's "Riddle of the Universe" that of the church historian *Loofs*—Anti-Haeckel (5th ed., Halle, 1906) should be mentioned first. Loofs shows the "presumptuous ignorance" of Haeckel's discussions of church history. Other important works in opposition to Haeckel are the following:

Paulsen, Fr.: Ernst Haeckel als Philosoph, published in Preussische Jahrbücher (Vol. CI, pp. 29–72), and also in Philosophia Militans (Berlin, 1901).

Adickes, E.: Kant contra Haeckel (2nd ed., 1906).

Hönigswald, R.: Ernst Haeckel, der monistische Philosoph (1900).

Haeckel's essay: Der Monismus als Band zwischen Religion und Wissenschaft, and the book mentioned so often in the text—Die Lebenswunder, are similar to the Welträtsel. His Natürliche Schöpfungsgeschichte (2nd ed., Berlin, 1908), deserves to be taken more

seriously. Of the special technical works which form the basis of his philosophy, the following should be mentioned:

Generelle Morphologie der Organismen; Anthropogenie oder Entwicklungsgeschichte der Menschen, and Systematische Phylogenie. In these works Haeckel is incomparably more cautious and reserved in what he writes than in his popular works just mentioned. For example, in the Preface to his Systematische Phylogenie (p. 6), he writes: "It goes without saying that the history of our origin is and will remain a building of hypotheses, as well as its sister, historical geology. For it seeks to gain consistent knowledge about the cause and the march of events which have long since occurred, the immediate examination of which is therefore an impossibility. Neither observation nor experiment can give us direct information about the innumerable processes of transformation through which the animal and plant forms known today have issued from their long line of ancestors. Only a small number of those changes, which the phylogenetical transformations have produced, lie before us in a tangible form. By far the greater number will forever remain hidden from us."

In general see Georg Wobbermin's booklet: Ernst Haeckel im Kampf gegen die christliche Weltanschauung (Leipzig, 1906). Reprinted in Monismus and Monotheismus.

The following of the works of Haeckel referred to by Dr. Wobbermin are in English: Riddle of the Universe (Harper, 1905). Monism as connecting Religion and Science (Macmillan). The Wonders of Life (Harper, 1905). History of Creation (2 Vols., Appleton, 1906). Evolution of Man (2 Vols., Appleton, 1905).

The chief representative of the most recent reaction in natural science caused by the ultraism of Haeckel is the zoölogist, Fleischmann. He has given expression to this especially in his voluminous Die Deszendenztheorie (Leipzig, 1901). Fleischmann says that the present general supremacy of the concept of evolution is due solely to man's inclination for fairy stories (p. 109). The theory of evolution is defective and objectionable, and anyone who is really working with good intentions should take no account of it, because it leads only to nonsense (p. 253). Apart from many special passages which are worthy of attention, and which are not void of significance to the general position of philosophy, Fleischmann's position is unquestionably untenable. The most important and decisive criticisms of his view are the following: (1) He pays no attention to the relation in which the theory of descent stands to the doctrine of evolution as a whole (cosmic evolution). (2) He misconstrues the fact that the concept of evolution is a (natural) philosophical idea by taking it for granted that we are dealing with a special scientific result. (3) For these reasons the special arguments which he uses to establish his position are insufficient because logically falsely orientated. The justification of the concept of evolution in itself (that is, apart from its detailed development) is not dependent upon whether every single problem will be solved by its use, but upon whether it makes possible a complete understanding which would otherwise be lacking, and upon whether the special problems win intelligibility by being classified together. *Cf.* also, Fleischmann's Die Darwinische Theorie (1903).

[10] *Roux* is the editor of the Archiv für Entwicklungsmechanik der Organismen. In 1895 he published

his Gesammelte Abhandlungen über Entwicklungsmechanik der Organismen. Of his other writings the book especially significant from our point of view is Der Kampf der Teile im Organismus (Leipzig 1881).

[11] Of the numerous works of *Weismann* the following are especially worthy of our attention: Über Leben und Tod; Zur Frage nach der Unsterblichkeit der Einzelligen; Das Keimplasma; Die Allmacht der Naturzüchtung; Neue Gedanken zur Vererbungsfrage; Über Germinalselektion; Vorträge zur Deszendenztheorie (2 Vols. 2nd ed. 1904). The latter is a sketch of the Darwinian theory of selection. Weismann's controversy with Herbert Spencer over whether functionally acquired variations of structure are hereditary is well known. Spencer was right in affirming with certain restrictions what Weismann denied.

The following works of Weismann are in English: Germplasm (2 Vols., Scribners). Germinal Selection as the source of definite Variation (Open Court, Chicago). Essays upon Heredity (2 Vols., Oxford, edited by E. Poulton).

[12] *Nägeli:* Mechanisch-physiologische Theorie der Abstammungslehre (Munich and Leipzig).

[13] *De Vries, H.:* Die Mutationslehre (Leipzig, 1901–03). Arten und Varietäten und ihre Entstehung durch Mutation. According to De Vries the important development from species to species is not accomplished by variation, that is to say, not by a gradual progressive development of the smallest variations, but by mutation, that is, by a sudden leap.

The following of the writings of De Vries are in English: Mutation Theory (2 Vols., Open Court, Chicago): Species and Varieties, their origin by mutation (Open Court).

[14] Of *Ostwald's* numerous publications his Vorlesungen über Naturphilosophie (3rd ed., 1905) is the most important. If we would be exact, it should be noted that Ostwald's whole undertaking can be considered natural philosophy only in a very restricted sense, for he intentionally rejects all *apriorism.*

Ostwald's Natural Philosophy has been translated (Holt, 1910).

[15] *Driesch* has passed gradually from a mechanical naturalistic world-view to a most emphatic insistence upon the uniqueness of the processes of life. He is the leader of the neo-vitalists. At the same time, he naturally leans toward Aristotelianism. *Cf.* especially the following of his works: Die Biologie als selbstständige Grundwissenschaft: Die organischen Regulationen: Naturbegriffe und Natururteile: Der Vitalismus als Geschichte und als Lehre: Philosophie des Organischen (2 Vols., 1909).

Driesch's Science and Philosophy of the Organism is in English (Macmillan). His lectures on Vitalism are also in English (Macmillan).

[16] *Reinke:* Die Welt als Tat (Berlin, 4th ed., 1905). Reinke gives a more technical exposition of his view in his Einleitung in die theoretische Biologie (Berlin, 1901). See also the article: Die Dominantenlehre in Natur und Schule (2nd ed., 1903). Reinke's general philosophical position must be carefully weighed. Taken as a whole his epistemological position is really not that of "critical philosophy," and that weakness often mars his judgment of particular problems. To this weakness, for example, is due his exceedingly unfortunate position toward the account of creation in Genesis.

[17] *Hartmann's* basic work is Die Philosophie des

Unbewussten (2nd ed., 3 Vols., 1904). From our own point of view the second part of his Religionsphilosophie is also especially important. It bears the special title: Die Religion des Geistes (1882). Of his more recent works the following should be mentioned: Kategorienlehre (1896): Geschichte der Metaphysik (2 Vols., 1899–1900).

Drews, Arthur: has published a good exposition of the Hartmannian philosophy: E. von Hartmanns philosophisches System im Grundriss (1902). Of Drews' other works the following deserve special mention: Die deutsche Spekulation seit Kant, mit besonderer Rücksicht auf das Wesen des Absoluten and die Persönlichkeit Gottes (1893): Die Religion als Selbstbewusstsein Gottes (1906). Drews also wrote the introductory article in the book on monism which he edited: Der Monismus in Beiträgen seiner Vertreter (1908). He has recently undertaken, with less success, to discuss historical subjects. So far as the special historical discussions are concerned his book entitled: Die Christusmythe (Jena, 1909, Part II, 1911) is highly contestible. For a discussion of the chief questions bearing on the significance of the historicity of Jesus Christ for the Christian religion, see my Geschichte und Historie in der Religionswissenschaft (Tübingen, 1911).

The following of the above mentioned works are in English: Hartmann's Philosophy of the Unconscious (Paul, Kegan, French, Trubner & Co., London): Drews' Christ Myth (Open Court, Chicago).

[18] *Baumann, Jul.:* Die Grundfrage der Religion (1895): Realwissenschaftliche Begründung der Moral, des Rechts und der Gotteslehre (1898): Neuchristentum und reale Religion (1901).

[19] Höffding: Philosophy of Religion (Macmillan).

[20] In my opinion, *Wundt's* chief significance as a philosopher lies in his comprehensive knowledge which extends into the most varied spheres, and which he is able to utilize in the discussion of special philosophical problems. The result is that such problems are dealt with by him upon the basis of all present-day experimental knowledge. As evidence of this see especially the methodological part of his *Logik* (1894–95). Of course, on the other hand, it is just this characteristic which constitutes the basis for the limitations that are contained in his methodology, and which are very evident, so far as his *Logik* is concerned, when it is compared with the *Logik* of Christ. Sigwart, for example (2nd ed., 1889–93, Vol. II, Die Methodenlehre. This book is in English). The same criticism is valid of Wundt's most recent comprehensive work: Völkerpsychologie. (See especially Vols. 3, 4 and 5 of the 2nd ed.) For Wundt's metaphysical position see his System der Philosophie (3rd ed., 1903).

The most important of Wundt's disciples is *Oswald Külpe*—see especially his Einleitung in die Philosophie (3rd ed., 1907). A good résumé of the philosophy of Wundt is that by *Edm. König* in Fromann's Sammlung philosophischer Klassiker (1901). *Cf.* also *Rudolph Eisler:* W. Wundts Philosophie und Psychologie (1902).

Külpe's Study of Philosophy is published in English by Allen, George & Co., London.

[21] *Fr. Paulsen* (died 1908): Kant, der Philosoph des Protestantismus (1899). *Cf.* also his exposition of Kant's philosophy in Frommann's Sammlung philosophischer Klassiker (4th ed., 1903). His Einleitung in die Philosophie (16th ed., 1906) is especially noteworthy from our point of view. *Cf.* also Anm. 9.

Paulsen's Introduction to Philosophy (Holt, and also Paul, Kegan, Trench, Trubner & Co.), and his Kant (Scribners) are in English.

[22] *William James* (died 1910) is known primarily by his Principles of Psychology, Varieties of Religious Experience and Pragmatism. He was a strong advocate of pragmatism in his last years. Indeed this is foreshadowed in his interesting essays: The Will to Believe.

[23] *Fechner's* chief philosophical work is entitled Zend Avesta (1851, new ed. by Lasswitz, 1901). The best exposition of Fechner's philosophy is that by *Kurd. Lasswitz* in Fromann's Sammlung, 3rd ed., 1910. The following works of Fechner are important as developments of the doctrine set forth in Zend Avesta: Das Bucklein vom Leben nach dem Tode (4th ed., 1900): Nanna, oder über das Seelenleben der Pflanzen (edited by Lasswitz, 1899). *Cf.* also Wundt's Gustav Theodor Fechner, Rede zur Feier seines hundertjährigen Geburtstages (1901). Also R. Liebe: Fechners Metaphysik (1903).

Fechner's Little Book of Life after Death has been twice translated into English (Little, Brown & Co., Boston, with an introduction by William James, and Open Court, Chicago).

[24] *Eucken* has himself published a philosophy of religion: Der Wahrheitsgehalt der Religion (2nd ed., 1905). Chief among his other works are the following: Der Kampf um einen geistigen Lebensinhalt (2nd ed., 1907): Geistige Strömungen der Gegenwart (4th ed., Grundbegriffe der Gegenwart, 1909). His Lebensanschauungen der grossen Denker (6th ed., 1905) should also be mentioned.

The following of the works of Eucken are in English: Truth of Religion (Putnam, 1911): Problems of Human

Life, as viewed by the great thinkers from Plato to the present time (Macmillan, 1909): Main Currents of Modern Thought (1912).

[25] *Wilhelm Dilthey:* (died 1911) unfortunately never completed his Einleitung in die Geisteswissenschaften, the main tendency of which I outlined in the text. The first volume appeared in 1883. Along with it we should mention his voluminous discussion: Ideen über eine beschreibende und zergliedernde Psychologie (in the Sitzungsberichten der Berliner Akademie der Wissenschaften, 1894). The exceedingly noteworthy sketch, referred to in the text, about the world-views that are possible today is to be found in the Archiv für Geschichte der Philosophie (Neue Folge, Vol. IV, 1898, pp. 551 ff.). *Cf.* also Dilthey's Wesen der Philosophie in Hinneberg's Kultur der Gegenwart (Vol. I, Pt. IV), and his: Die Typen der Weltanschauung und ihre Ausbildung in den metaphysischen Systemen, in the collective work Weltanschauung (Berlin, 1910).

In a somewhat different way *Heinrich Rickert* endeavors to reach the same goal as Dilthey. His great epoch-making work bears the title: Die Grenzen der naturwissenschaftlichen Begriffsbildung (2nd ed., 1913). The smaller work: Kulturwissenschaft und Naturwissenschaft (2nd ed., 1910), gives a brief and helpful discussion of the basic thoughts. *Cf.* also Rickert's article Geschichtsphilosophie, in the volume published in memory of Kuno Fischer: Die Philosophie im Beginn des 20 Jahrhunderts (2nd ed., 1907). Since 1910 Georg Mehlis has been publishing in Tübingen an international magazine for the philosophy of culture under the title "*Logos*," in which some valuable articles by Rickert have appeared. For the significance of the position of Rickert to theological and religio-philosoph-

ical work, see my discussion in Geschichte und Historie in der Religionswissenschaft (Tübingen, 1911). *Cf.* also Fr. Traub, Theologie und Philosophie, pp. 93 ff.

Windelband, Präludien (3rd ed., 1907).

[26] *Herbert Spencer's* System of Synthetic Philosophy (1862 ff.) contains in volume I, First Principles, the fundamental principles of the whole system, and in the other nine volumes the application of these prinicples to the disciplines Biology (new revised and enlarged edition 1898–99), Psychology, Sociology and Ethics. Spencer makes the theory of evolution into a philosophy, and develops the concept of evolution in every sphere of human knowledge. (See Gaup: Herbert Spencer Fromann's, 2nd ed., 1900.) That Spencer is thereby led into arbitrariness and dilettantism cannot be denied.

[27] See Kant's formulation of this thought in Religion innerhalb der Grenzen der blossen Vernunft, 2nd ed., p. 16.

[28] See Kant's posthumous writings, published by Rudolph Reicke (Altpreussischen Monatsschrift, Vols. XIX and XX). *Cf.* also Heman in Kantstudien (1904, pp. 155 ff.).

[29] The history of the discovery of Neptune, that is to say, the history of the prognostication of its existence, and of the approximated precomputation of its course (the course of a planet hypothetically disclosed!) on the basis of the variations in the course of Uranus, along with the discovery of the planet later by Galle, is not only highly interesting in itself, but is also of supreme importance to every complete epistemological and metaphysical view. A purely positivistic epistemology, that is, an epistemology which claims that experience is the only source of knowledge, is contradicted

by such a fact as the discovery of Neptune. W. Meyer has given a detailed account of the discovery (Vierteljahrsschrift der Züricher naturforschenden Gesellschaft, 1874, pp. 226 ff.).

[30] Du Bois Reymond: Über die Grenzen des Naturerkennens (8th ed., 1898, p. 17). The further development following the statement given in the text shows that the criticism there given is not unjust. Moreover a further epistemological error, worse than the one pointed out, is to be seen. For he makes the supposition that the "Laplacian Spirit" is not limited to natural occurrence in its ability to foretell events, but is able to foretell what will happen in the future of the race. Thus the human will is treated as if it were a physical atom.

[31] To supplement the very brief sketch of the positions of Hartmann, Drews, Spencer and Wundt which was given in the text, the following references to especially instructive résumés of their philosophy by each of these writers should be given: *Hartmann*, Die Religion des Geistes, pp. 155 ff. *Cf.* Anm. 17. *Drews*, Die deutsche Spekulation seit Kant, Vol. I, pp. 65 f., *cf.* also, Das Ich als Grundproblem der Metaphysik, pp. 279 ff., and Die Religion als Selbstbewusstsein Gottes, pp. 282 ff.: *Spencer*, First Principles, concluding section of the book, reprinted as especially characterizing his position by Spencer himself in Principles of Biology (concluding section): *Wundt*, System der Philosophie, 2nd ed., pp. 666 ff.

[32] *H. Lotze's* well known article: Leben und Lebenskraft in Wagner's Handwörterbuch der Physiologie (Braumschweig, 1842).

[33] Oscar Hertwig's Zeit- und Streitfragen der Biologie, having been written for the general public, is

especially deserving of recommendation. For the question dealt with in the text the work entitled Mechanik und Biologie (1897) is important. See also his address: Die Lehre vom Organismus und ihre Beziehung zur Sozialwissenschaft (1899). The text-book: Die Zelle und die Gewebe (1893–98) is strictly technical. In Vol. II, Ch. V, he gives a thorough discussion of the difference between the mechanical and the organic. This book is in English (Allen, George & Co., London).

[34] H. Driesch: Philosophie des Organischen, Vol. II, pp. 135 f.

[35] Kupffer gives the criticism of the text in his address at the opening of the tenth convocation of the Anatomische Gesellschaft (Ergänzungsheft zum XII Band des Anatomischen Anzeigers, 1896). The investigations in question were conducted by Herbst, to whom we also owe the discovery that the eyes of crabs can only be regenerated when the *ganglia opticum* remains unimpaired. Similar investigations were made by H. Przibram in 1900 at the zoölogical station in Naples. Among the results of these the following is especially interesting from our point of view, not only because it warns us against what was mentioned in the text, but also because, by reason of its greater complexity, it warns us against a premature acceptance of "dysteleology." In species of alpheus which lose the large "snapping claw," a small "pinching claw" afterwards grows in its place, while the pinching claw which has not been destroyed develops, by means of various changes in size and form of the skin, into a snapping claw. See Przibram's proof in Vol. XX, p. 526, of the Biologischen Zentralblatt. Further testimony is to be found in the works of Driesch (see Anm. 15, but more especially Die Organischen Regulationen,

1901, and Philosophie des Organischen, Vol. I, 1909).

[36] Natürliche Schöpfungsgeschichte, 10th ed., p. 775. When Haeckel here refers to Helmholz—"as this, for example, has been proven, so far as the human eye is concerned, by Helmholz, one of the most careful investigators of the eye"—he is thinking of Helmholz' discussion in the Handbuch der Physiologischen Optik, where he refers, despite his admiration of the wonderful arrangement of the human eye, to the fact that imperfections are to be found in it. However, so far as the bearing of this fact upon our own and Haeckel's philosophical formulation of the question is concerned, the following sentence from Helmholz, which is the most significant one of all, shows with the utmost desirable clearness. "The apparent monochromatical divergencies in the eye are not, as the spherical aberrations of glass lenses, symmetrical around an axis, but, on the contrary, they are unsymmetrical and of such a kind *as are not to be found in well made optical instruments*" (2nd ed., p. 170). The words I have italicised show very plainly the point of view which, in a subjective and sub-conscious way, dominates Helmholz' whole conception.

[37] *K. E. von Baer* (died 1876), excepting Darwin, did more than anyone else to give a scientific establishment to the doctrine of evolution—a doctrine which he even advocated before 1859, that is to say, before the appearance of Darwin's Origin of the Species. Von Baer was foremost among the natural scientists and philosophers exercising a great influence upon Herbert Spencer. For the Baerian thesis, that the evolution of every living being consists in an advance from a similarity of structure to a dissimilarity of structure, was extended

and enlarged by Spencer into a general law of evolution, namely, that all evolution consists of a process of gradual dissipation and concomitant integration (see First Principles, p. 470). The work of von Baer which is of general philosophical interest bears the title Reden und kleinere Aufsätze and is in two volumes. For his conception of a directedness toward an end, see his treatise: Über Zweckmässigkeit oder Zielstrebigkeit überhaupt, and also, Über Zielstrebigkeit in den organischen Körpern insbesondere (*op. cit.*, Vol. II, pp. 51 ff. and 173 ff.). The catholic philosopher, R. Stölzle, has given a complete and useful exposition of the Baerian world-view: K. E. v. Baer und seine Weltanschauung (1897).

P. N. Cossmann's book: Elemente der empirischen Teleologie (1899) has the merit of pointing out the extent to which recent science, even though often unwillingly and contrary to its desire in the matter, works with teleological principles.

[38] Reinke expresses this view under the concept "*dominanten*." *Dominanten* are for him the fundamental forces which guide evolution. They are to be presupposed for the most varied spheres of organic life. It should not be overlooked that this theory of Reinke assists in the obliteration of the boundaries between natural scientific investigation and philosophical reflection. It can claim no further credit than that of having brought to expression the need of an enlargement of the causal and mechanistic by a teleological view.

[39] In his address before the Akademie der Wissenschaften, of Berlin, entitled "The Epistle of Ptolmey to Flora," Harnack has brought out the fact that, even in early Christianity, attempts were not lacking at bringing the basic thoughts of the Christian religion

under a kind of evolutionary idea. (Sitzungsberichte der Berliner Akademie der Wissenschaften, 1902, pp. 522 ff.).

[40] Whereas, for example, so far as the animal kingdom is concerned, the standard classification of the first half of the 19th century was that of George Cuvier, in which four great branches (vertebrates, articulates, mollusks and radiates) were differentiated, the classifications of zoölogists today vary from seven (R. Hertwig) to seventeen (Fleischmann) divisions.

[41] The famous *archaeopteryx lithographica*, found in the slates of Solenhofen, certainly cannot be considered a special intermediary form between birds and reptiles. But it does show the hypothetical character and the insufficiency of our idea of classes. See Fleischmann (*op. cit.* Ch. VI).

[42] A discovery made in 1891 in Java by a Dutch army surgeon, Eugene Dubois, has been put forth with decided positiveness by Haeckel and his friends as a fossil of a "true monkey-man" (*Pithecantropus erectus*). From Haeckel's account in the Natürliche Schöpfungsgeschichte the laity would scarcely understand that this discovery consisted only of a skull, two molar teeth and a thigh bone! And it should be added that it has never been proven that these pieces all belong to a single individual. Haeckel's concluding verdict is so characteristic of his way of dealing with such matters that I cannot refrain from quoting it here. "This genuine monkey-man stands so nearly between the known man-like apes and the lower races of man that in 1895, at the International Zoölogical Congress, at Leyden, a very spirited debate as to its meaning took place. About a dozen leading authorities expressed their opinion on the subject. Three declared that the

thigh-bone and the skull of this great anthropoid belonged to a monkey, three others held that they belonged to a human being, and six or more other zoölogists declared the animal to be *what it really is according to the laws of logic(!)* namely: a true transitional form between man and monkey—the much sought "missing link" of the line of our ancestors. (*Op. cit.* 1902, pp. 715 f.). Today prominent zoölogists, for example, Hermann Klaatsch, declare that Dubois' discovery is not justly entitled to the name *Pithecantropus erectus*. They say that *erectus* is a misnomer because, in all probability, the animal did not have an erect posture. For the same reason, and also upon other grounds, the name *Pithecantropus* is also false. In all probability, so these authorities hold, this animal is a species of *Anthropopithecus*, and is a man-like ape.

On the other hand, the meaning of the so-called Neanderthal skull and the other fossils found with it, has recently been more strongly emphasized and more highly valued than hitherto. These bones were found in 1859 in the valley of Neander near Duesseldorf. The skull is of a man, is very flat on top and has a very thick bone-friz above the eye-holes. Virchow regards this as a pathological skull formation. But this is not the only other important discovery. Many others have been made. For example, to mention only the most significant, that made in Belgium in the cave of Spy, and especially the one made in Croatia, near Crapina, where a whole mound of bones, with pieces of no less than ten individuals representing different periods, has been discovered. The more recent discoveries of Moustier and La Chapelle-aux-Saints (both made in 1908) belong to the Neanderthal type. All of these discoveries show a type of man which really varies from

the average type of today. Yet they remain within the general type "man," and more than likely, they simply are evidence of an older race of men having existed.

It appears to be somewhat different with the third most recent discovery, that by the Heidelberg wall. Here, in October, 1907, there was unearthed a lower jaw-bone with some teeth intact, the characteristics of which, according to specialists, refer to a type that is older than the Neanderthal type. Indeed some investigators (especially Otto Schoetensack and Herrmann Klaatsch) think that they can see in this "*homo Heidelbergensis*" the universal root form from which, on the one hand, man, and on the other hand, the man-like apes, have developed. *Cf.* O. Schoetensack: Der Unterkiefer des "Homo-Heidelbergensis," (1909).

In conclusion, and this is the important point for us here, the Christian belief in God has absolutely no interest in the question of the direct origin of the human race, and the answering of this question in the strictest sense of the Darwinian theory would not in the least affect this belief.

[43] For a criticism of "biogenetic basic laws" see Ch. XIV of Fleischmann's Die Ausnahmen des biogenetischen Grundgesetzes. But Fleischmann's criticism is very unfortunate in this connection because it is so exaggerated. Prudent and sober-minded specialists take the position given in the text. For example, see Oscar Hertwig: Die Zelle und die Gewebe (1898, Bk. II, pp. 273 ff., translated).

[44] The technical expressions of the text refer to the most important elements and stages of embryonic development, according to the view considered valid